

STUDENT MANUAL

Microsoft® Office
Word 2016:
Part 3

Microsoft[®] Office Word 2016: Part 3

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Part Number: 091050

Course Edition: 1.0

Acknowledgements

PROJECT TEAM

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Logical Operations wishes to thank the Logical Operations Instructor Community, in particular Ketta Nanna, Mickey Curry, and Joe Valentine for contributing their technical and instructional expertise during the creation of this course.

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About This Course

Microsoft® Word 2016 enables you to do far more than simple word processing. Word includes advanced image manipulation tools, collaboration features, cross-referencing and linking tools, entry forms and data collection, security features, and tools to automate document production.

This course covers Microsoft Office Specialist exam objectives to help students prepare for the Word 2016 Exam and the Word 2016 Expert Exam.

Course Description

Target Student

This course is intended for students who want to use advanced capabilities in Word, including image manipulation, collaboration and revision tracking, cross-referencing and linking, document security, forms, and process automation through macros.

Course Prerequisites

To ensure success, you should be comfortable in the Windows® 10 environment, and be able to use Windows 10 to manage information on your computer. Specific tasks you should be able to perform include opening and closing applications, navigating basic file structures, and managing files and folders. The following Logical Operations courses would prepare you for this course:

- *Microsoft® Office Word 2016: Part 1*
- *Microsoft® Office Word 2016: Part 2*

Course Objectives

In this course, you will:

- Use images in a document.
- Create custom graphic elements.
- Collaborate on documents.
- Add reference marks and notes.
- Secure a document.
- Create and manipulate forms.
- Create macros to automate tasks.

The CHOICE Home Screen

Logon and access information for your CHOICE environment will be provided with your class experience. The CHOICE platform is your entry point to the CHOICE learning experience, of which this course manual is only one part.

On the CHOICE Home screen, you can access the CHOICE Course screens for your specific courses. Visit the CHOICE Course screen both during and after class to make use of the world of support and instructional resources that make up the CHOICE experience.

Each CHOICE Course screen will give you access to the following resources:

- **Classroom:** A link to your training provider's classroom environment.
- **eBook:** An interactive electronic version of the printed book for your course.
- **Files:** Any course files available to download.
- **Checklists:** Step-by-step procedures and general guidelines you can use as a reference during and after class.
- **LearnTOs:** Brief animated videos that enhance and extend the classroom learning experience.
- **Assessment:** A course assessment for your self-assessment of the course content.
- Social media resources that enable you to collaborate with others in the learning community using professional communications sites such as LinkedIn or microblogging tools such as Twitter.

Depending on the nature of your course and the components chosen by your learning provider, the CHOICE Course screen may also include access to elements such as:

- LogicalLABS, a virtual technical environment for your course.
- Various partner resources related to the courseware.
- Related certifications or credentials.
- A link to your training provider's website.
- Notices from the CHOICE administrator.
- Newsletters and other communications from your learning provider.
- Mentoring services.

Visit your CHOICE Home screen often to connect, communicate, and extend your learning experience!

How to Use This Book

As You Learn

This book is divided into lessons and topics, covering a subject or a set of related subjects. In most cases, lessons are arranged in order of increasing proficiency.

The results-oriented topics include relevant and supporting information you need to master the content. Each topic has various types of activities designed to enable you to solidify your understanding of the informational material presented in the course. Information is provided for reference and reflection to facilitate understanding and practice.

Data files for various activities as well as other supporting files for the course are available by download from the CHOICE Course screen. In addition to sample data for the course exercises, the course files may contain media components to enhance your learning and additional reference materials for use both during and after the course.

Checklists of procedures and guidelines can be used during class and as after-class references when you're back on the job and need to refresh your understanding.

At the back of the book, you will find a glossary of the definitions of the terms and concepts used throughout the course. You will also find an index to assist in locating information within the instructional components of the book.

As You Review






Any method of instruction is only as effective as the time and effort you, the student, are willing to invest in it. In addition, some of the information that you learn in class may not be important to you immediately, but it may become important later. For this reason, we encourage you to spend some time reviewing the content of the course after your time in the classroom.

As a Reference

The organization and layout of this book make it an easy-to-use resource for future reference. Taking advantage of the glossary, index, and table of contents, you can use this book as a first source of definitions, background information, and summaries.

Course Icons

Watch throughout the material for the following visual cues.

<i>Icon</i>	<i>Description</i>
	A Note provides additional information, guidance, or hints about a topic or task.
	A Caution note makes you aware of places where you need to be particularly careful with your actions, settings, or decisions so that you can be sure to get the desired results of an activity or task.
	LearnTO notes show you where an associated LearnTO is particularly relevant to the content. Access LearnTOs from your CHOICE Course screen.
	Checklists provide job aids you can use after class as a reference to perform skills back on the job. Access checklists from your CHOICE Course screen.
	Social notes remind you to check your CHOICE Course screen for opportunities to interact with the CHOICE community using social media.

1

Manipulating Images

Lesson Time: 1 hour

Lesson Objectives

In this lesson, you will:

- Combine pictures and text in a tightly integrated layout.
- Adjust image appearance.
- Link to an online video.

Lesson Introduction

You have seen how styles and themes can change the look of your document. You can add images to your document to provide additional information and visual appeal. In this lesson, you will add and adjust images in your document.

Adding images to your document can enhance its usefulness and visual appeal. The image should supplement your text rather than take away from it.

TOPIC A

Integrate Pictures and Text

Once you have resized an image and changed its appearance, you might want to change how the image integrates with the text on the page. Text wrapping enables you to control how the text wraps around the image.

Image Size and Cropping

In Word, you have extensive control over image size and shape through Word's resizing and cropping options.



Figure 1–1: Size and cropping options.

The following table describes the tasks you can perform on images.

Task	Description
Resize the image	Resize to change the image's scale compared to the text, or to stretch the image's height or width to give it different proportions. You can manually resize any image—including a photograph or clip art picture—by using the sizing handles on the image, or you can resize the image to an exact height and width. You can also scale the image so that it is a certain percentage larger or smaller than the original image.

Task	Description
Crop an image as a rectangle	<p>Crop an image to show just the visual information you want to show, slicing away content from one or more edges of the image. Use the Crop tool to drag the edges or corners of the image in, and you'll remove a portion of the image. The rest of the image isn't really removed; it just isn't displayed. So if you decide you want any part of the image back, just use the Crop tool again, dragging the crop handles back out to reveal more of the image.</p> <p>By default, the cropping mode gives you a rectangle that is the size of the image. You can also set a Crop option to set the aspect ratio to control the proportions of the cropping frame. The options include square, several portrait ratios, and several landscape ratios.</p>
Crop an image to a shape	<p>Provide a shape that will be used to mask parts of the image that extend outside of the shape. Only the portion of the image within the shape area is displayed. You can then fill the image to the shape or fit the image to the shape.</p>

Text Wrapping Styles

Text wrapping is used to arrange images and text in a document. Word includes several text wrapping styles that specify how the text and images will flow with each other. Images are inserted inline by default and keep their position relative to the text. You can also insert an image as a floating image that is stored in a separate drawing layer. Floating images are positioned relative to the page, and text flows around the image. Use an inline image to ensure that text that refers to the image stays with the image.

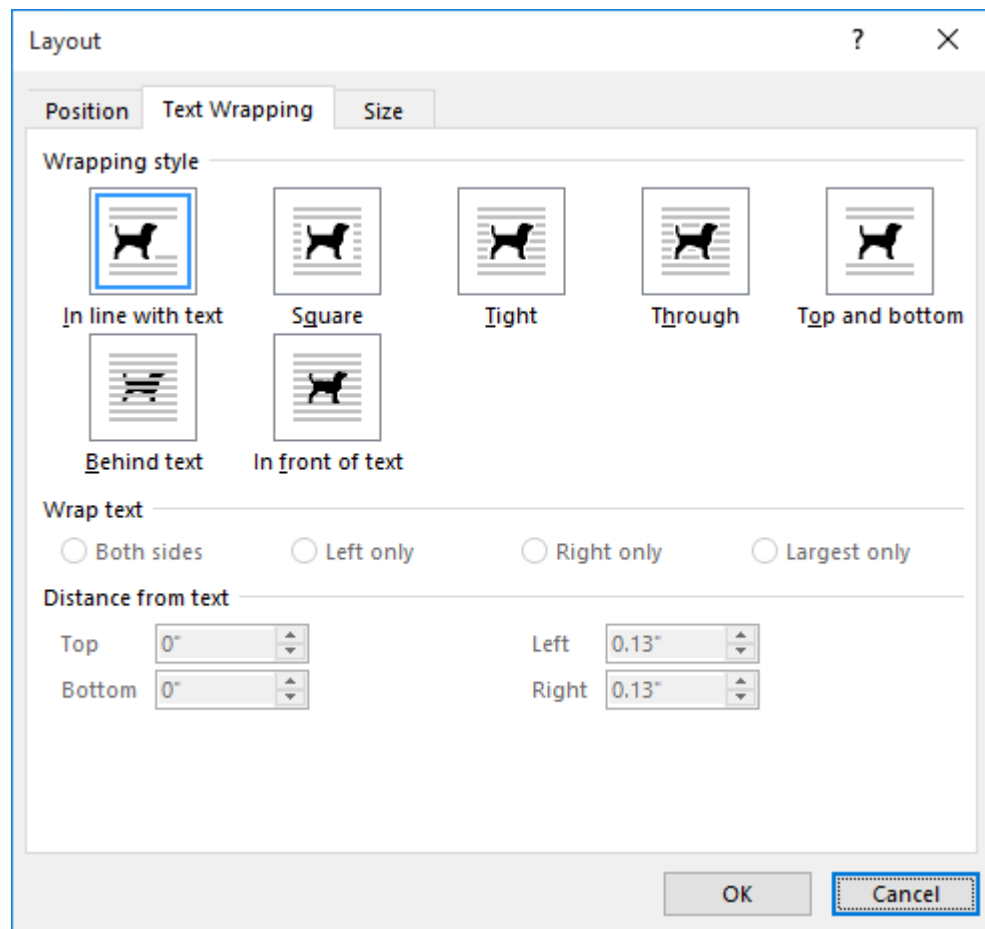


Figure 1–2: Layout dialog box text wrap options.

You can select the text wrap style on the **Picture Tools Format** tab, in the **Arrange** group. You can also configure additional text wrapping options in the **Layout** dialog box. This dialog box is accessed from **Wrap Text**→**More Layout Options**. Some options can be applied only to floating graphics.

You can also access text wrapping options from the button that appears next to an image when the image is selected. This is a quick way to access the options without needing to select options from the ribbon or the dialog box.

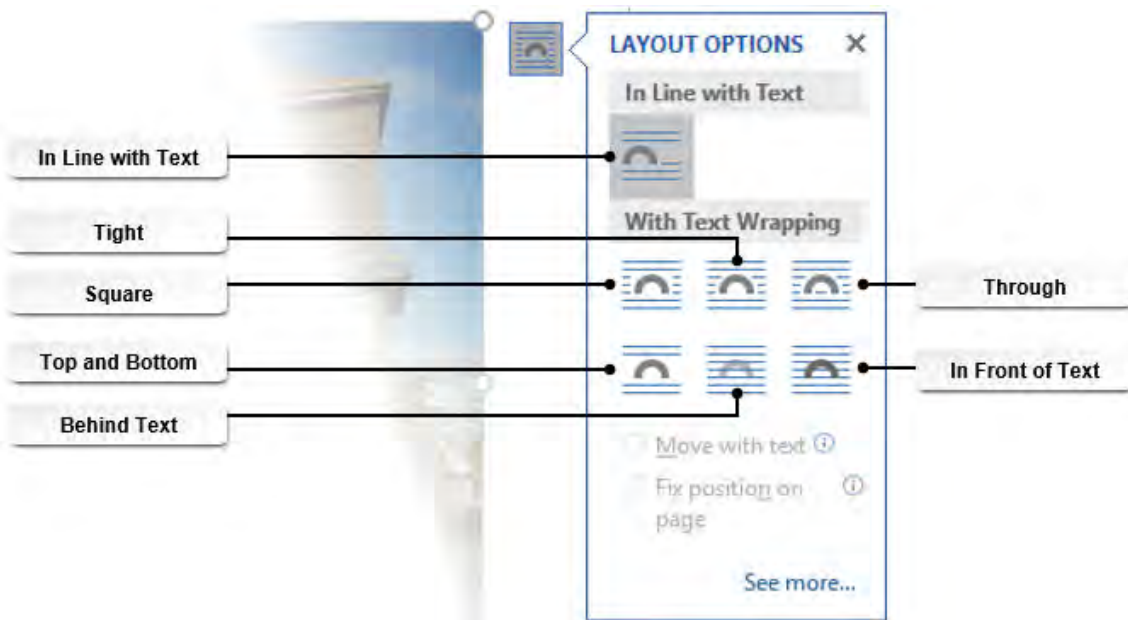


Figure 1-3: Layout options.

Text wrapping styles on the **Wrap Text** button or in the **Layout** dialog box include the following options.

<i>Style</i>	<i>Icon</i>	<i>Description</i>
In Line with Text		This is the default. The bottom of the image aligns with the baseline of the text.
Square		Wraps text around the image border.
Tight		Wraps text closely around an irregularly shaped image. Text stays outside the image.
Through		Wraps text closely around an irregularly shaped image. Text can flow inside the image's transparent space around the <i>wrap points</i> . Select Edit Wrap Points to bring the text closer to the image.
Top and Bottom		Places the image on a line that is separate from text lines.
In Front of Text		The image is displayed over the text.
Behind Text		The text is displayed over the image.



Note: Learn more about Word's text wrapping styles by accessing the LearnTO **Select Text Wrap Options** presentation from the **LearnTO** tile on the CHOICE Course screen.

Wrap Points

If you use the **Through** text wrap style, you will want to configure where the text will wrap around the image. Use the **Edit Wrap Points** option on the **Wrap Text** button. Initially, the image is surrounded by a square box. You can drag the red line to touch the edges of where the text should wrap. You can create as many wrap points as you need to define the edges of the image where the text will wrap.



Note: If you change wrap styles, the wrap points you set are lost. If you decide to change back to the **Through** wrap style, you will need to reset any custom wrap points you set.

Picture Positioning Options

By default, images are positioned inline with text. You can also position them with text wrapping so that the image appears to the side, middle, or corner of the document text. The gallery of positioning options allows you to preview the positioning of the image and text.

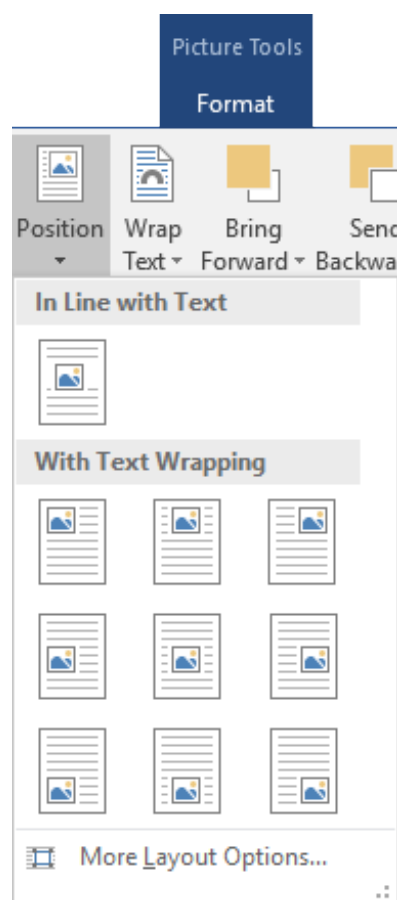


Figure 1–4: Image position options.

You can also configure exact positioning requirements in the **Layout** dialog box. In the **Layout** dialog box, you can specify horizontal and vertical positioning. If you want to make sure the image stays with a specific paragraph of text, check the **Lock anchor** and **Move object with text** check boxes.

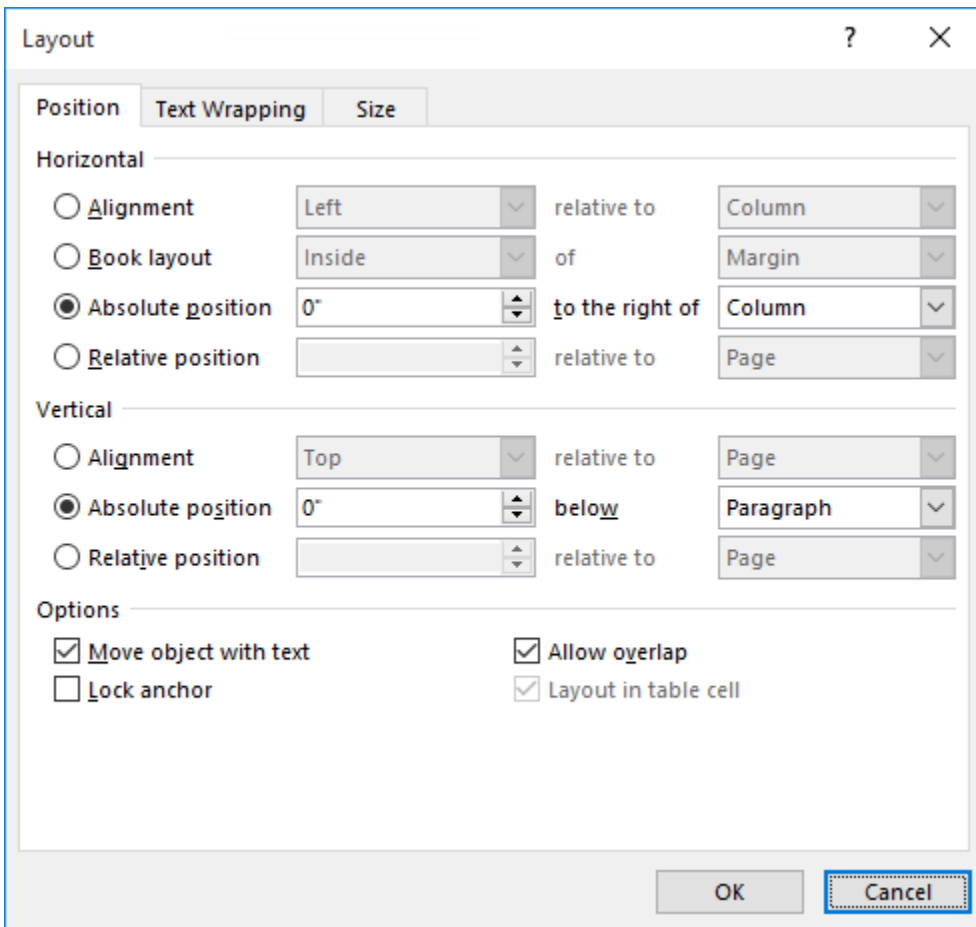


Figure 1-5: Position options can also be set in the Layout dialog box.

The following table describes the horizontal layout options.

Horizontal Layout Position	Description
Alignment	Align the image to the right, left, or center relative to a margin, column, page, or character.
Book Layout	Position the image inside or outside of a margin or page.
Absolute position	Specify how many inches to the right of a margin, column, page, or character the image will be placed.
Relative position	Specify as a percentage where the image is in relation to the margin or page.

The following table describes the vertical layout options.

Vertical Layout Position	Description
Alignment	Align the image to the top, center, bottom, inside, or outside relative to a margin, column, page, or character.
Absolute position	Specify how many inches below a margin, page, paragraph, or line the image will be placed.

Vertical Layout Position	Description
Relative position	Specify as a percentage where the image is in relation to the margin or page.

There are several other configuration options you can specify:

- Whether the object moves with the text.
- Whether the object can overlap the text.
- To lock anchor to position the object at a specific location.
- The layout position in a table cell.

Alignment Guides

You can also use alignment guides to help you position the image. When the image is aligned with the top of a paragraph, a temporary line is displayed to help you align it with the top of a paragraph. If you would also like to position it in the center of the paragraph, a vertical green line appears when the image is centered in the paragraph. If you are positioning the image in the center of the text, the temporary lines intersect at the center of the image to assist you in aligning the image with the text.

Rotate Images

There are times when you might be given a photo that was taken in landscape orientation and you need it in portrait orientation, or vice versa. In this instance, you could rotate the image 90 degrees to the desired orientation. Another instance when you might need to rotate an image is when you receive a scanned version of an image that you want to include in your document, but the image was scanned upside down. In this instance, you can flip the image vertically so that it is right side up. You can also rotate an image by using the **Rotate** handle on the image. You might want to do this to attract attention to an image by rotating it just slightly.

The Background Removal Tool

The **Background Removal** tool allows you to remove specific portions of an image without using a separate application. You can make an image stand out by removing the background around the part of the image you wish to show. You can mark areas to be removed or retained when you use this tool.

Selection of Graphic Elements

When you insert a graphic element such as an image into a document, you must select it in order to format its appearance. To select a graphic element, simply click it. Word displays handles around the graphic element to indicate that you have selected it. If you would like to select multiple graphic elements for formatting, click the first graphic element to select it, hold down the **Ctrl** key on your keyboard, and then click to select the next graphic element.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Integrate Pictures and Text.

ACTIVITY 1-1

Integrating Pictures and Text

Data File

Desktop\Projects\Manipulating Images\Newsletter.docx

Scenario

Building with Heart is a non-profit volunteer organization that helps families in need buy affordable, safe, and healthy homes. It is located in the fictional city of Greene City, Richland. As a Building with Heart staff member, you are preparing a newsletter that will be published through email, the web, and print. You will add stock photos of a saw and hammer to the newsletter and format them to allow text to weave into the empty areas in the photos.

Trolley Street Celebration



The Trolley Street site as it appeared in 1995.

Fifteen years ago, Dr. Patsy Heald, a professor of Mathematics at Greene College, approached the college board with her vision of a partnership between the college and Greene City Building with Heart.

The project captured the imagination of the board, and the college soon donated a site on Trolley Street. Faculty, staff, and students signed up as builders, and a site was selected for the first project. The rest is history.

On August 3, a celebration was held on Trolley Street, which is now the heart of a vibrant community, at the heart of which are seven homes that were building with Heart projects.

Six of the seven families who benefitted from the Trolley Street projects were represented. The celebration was attended by John and Sandy Sanford, Mike and Irene Rios and their twin sons, Sal and Rosetta



Krieg, Alice Guthrie, Shelly Schwartz, Marion and Bernie Ross, and Jay Nuffrick

Several family members delivered a short speech. Other speakers included Bill Rosen, current Director of Building with Heart and owner of Zev's Diner; Tammy Hager, Mayor of Greene City; Nancy Elliot, President of Greene City Board of Real Estate Agencies; and Dr. Laurel Perry, Associate Director of Project VITAL and Community Liaison for Thurman Greene Memorial Hospital.

Many stories were told about the thousands of hours of hard work contributed by volunteers through which the projects were successfully completed. While there were some tears in the crowd as homeowners shared how their lives were changed, some were laughing so hard they cried as Mayor Hager shared a hilarious collection of funny stories (complete with "bloopers" movies, in some cases) that volunteers have shared with us over the years.



Dr. Heald, former Director of the Building with Heart Trolley Street project and current Director of Development, recounted the project's original vision and identified how the vision was fulfilled.

The Trolley Street project garnered national attention and has been cited as an example of innovative design and construction. It was featured in the beautifully illustrated book *Building a Greener Future*, written by movie star, architect, and philanthropist Brant Pitt. Trolley Street homes are not only attractive and were economical to construct, they are energy-efficient and inexpensive to maintain.

Dr. Heald cited contributions of both materials and services by more than fifty Greene City community members. Bill Rosen announced several major new donations and unveiled the plan for the Clinton Street site.

Figure 1-6: Integrating pictures and text.



Note: Activities may vary slightly if the software vendor has issued digital updates. Your instructor will notify you of any changes.

1. Open the newsletter document.
 - a) From the **Desktop\Projects\Manipulating Images** folder, open **Newsletter.docx**.
 - b) Scroll, if necessary, to examine the newsletter.

The newsletter currently contains three images: the logo at the top of the first page, a photo of a house, and a photo of some volunteer builders on page 2.
2. Import the saw photo.
 - a) Position the insertion point before the word **Fifteen** in the first paragraph of the document.

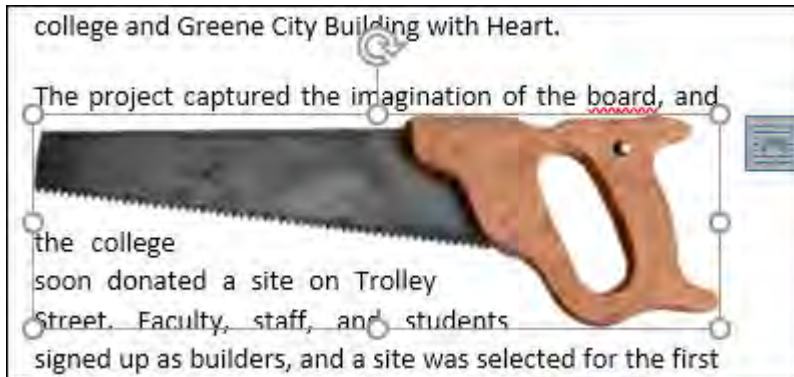
Fifteen years ago, Dr. Patsy Heald, a professor of Mathematics at Greene College, approached the college board with her vision of a partnership between the college and Greene City Building with Heart.

- b) On the **Insert** tab, in the **Illustrations** group, select **Pictures**.
 - c) Navigate to the **Desktop\Projects\Manipulating Images** folder, select **saw.png**, and select **Insert**.

The saw appears within the first column of the document. Because the image is selected, a **Layout Options** button is shown to the upper-right of the image.
3. Format the saw image to enable text to weave through it.
 - a) Select the **Layout Options** button.



- b) Select the **Through** layout option.



Text now passes into the transparent spaces around the outer edges of the PNG image.

- c) Make sure **Move with text** is selected.
4. Position and rotate the saw image.
- Drag the saw to the bottom of the left column.
As you drag, text flows around the image.
 - Make sure the image is still selected, and drag the rotation handle (the circular arrow above the top center of the image) slightly to the left to rotate the image counter-clockwise.
 - Adjust the image position and rotation until you are pleased with the result.



5. Observe the behavior of an image that is anchored to text.
- Position the insertion point after the sentence **The rest is history.**
This sentence is located in the left column, at the end of the second paragraph.
 - Press **Enter** several times, and observe as the saw moves to the right column.
You may need to scroll to see the saw at the top of the second column.
 - Press **Backspace** as many times as needed to remove the blank lines you just created.
 - Consider how the image is anchored in the document.
The image is currently anchored to the text. In this case, you want to anchor the image to the page to keep it from moving if text is added or removed in the area preceding the image.
6. Anchor the image to the page.
- Make sure the saw image is selected.
 - Select the **Layout Options** button.
 - Select **Fix position on page**.
 - Adjust the saw image position, if necessary, so no text wraps below it.

7. Verify that the saw now remains fixed in position.
 - a) Add several blank lines after the sentence **The rest is history**. Verify that the saw image remains in position at the bottom of the left column.
 - b) Remove the blank lines you added.
8. Insert the hammer photo in the second column of the document.
 - a) In the right column, position the insertion point before the paragraph that begins with **Many stories were told**.

Many stories were told about the thousands of hours of hard work contributed by volunteers through which the projects were successfully completed. While there were some tears in the crowd as homeowners shared how their lives were changed, some were laughing so hard they cried as Mayor Hager shared a hilarious collection of funny stories (complete with “blooper” movies, in some cases) that volunteers have shared with us over the years.

- b) On the **Insert** tab, in the **Illustrations** group, select **Pictures**.
 - c) Navigate to the **Desktop\Projects\Manipulating Images** folder, select **hammer.jpg**, and select **Insert**.
The hammer appears within the second column of the document.
9. Format the hammer image to enable text to weave through it, as you did for the saw image.
 - a) Select the **Layout Options** button.
 - b) Select the **Through** layout option.
 - c) If **Fix position on page** is not selected, then select it.
 - d) Examine the text around the image.

Because the JPG image has a solid background (unlike the PNG image, which had a transparent background), the text does not flow into it. You'll have to remove the image's white background so text can flow through it.
10. Remove the hammer image's background.
 - a) Make sure the hammer image is selected.
 - b) On the **Picture Tools Format** tab, in the **Adjust** group, select **Remove Background**.
The image background turns purple, and a cropping frame appears.



Note: If the cropping frame disappears after a moment, you may have to reselect the image and select **Remove Background** again to re-show it.

- c) Drag the handles of the cropping frame so that none of the hammer extends outside the frame.



- d) When prompted, select **Keep Changes** to remove the background.
e) Select a point outside of the image to deselect it.
Text now flows up to the hammer image.

- f) Drag and resize the image until you are pleased with its position and size.

Trolley Street Celebration



The Trolley Street site as it appeared in 1995.

Fifteen years ago, Dr. Patsy Heald, a professor of Mathematics at Greene College, approached the college board with her vision of a partnership between the college and Greene City Building with Heart.

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Several family members delivered a short speech. Other speakers included Bill Rosen, current Director of Building with Heart and owner of Zev's Diner; Tammy Hager, Mayor of Greene City; Nancy Elliot, President of Greene City Board of Real Estate Agencies; and Dr. Laurel Perry, Associate Director of Project VITAL and Community Liaison for Thurman Greene Memorial Hospital.

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Dr. Heald cited contributions of both materials and services by more than fifty Greene City community members. Bill Rosen announced several major new donations and unveiled the plan for the Clinton Street site.

11. Save the document in the current folder (Desktop\Projects\Manipulating Images) as *My Newsletter.docx*

TOPIC B

Adjust Image Appearance

You have resized images to make them fit the context of the page. You can also adjust the image's contrast, brightness, and coloring.

The Adjust Group

The **Adjust** group on the **Picture Tools Format** tab includes features that enable you to adjust properties of the picture such as brightness, contrast, sharpness, and color. From this group, you can also remove the background from the image, and add artistic effects such as pencil or watercolor effects. In addition, you can compress the image to reduce the file size.



Figure 1-7: The Adjust group includes options for image corrections, color, artistic effects, and compression.

Corrections Options

If an image is too washed out or too bright, you can try to use the **Corrections** options to adjust the sharpness, brightness, and contrast of the image. You can also sharpen or soften the image by using preset settings or by setting your own percentage.

Picture Contrast and Picture Brightness

Contrast controls the difference, as a percentage, between adjacent colors or shades of gray in an image. The contrast extremes are 0%, which makes the image gray, and 100%, which makes the image black. White areas of the image are not affected by contrast settings.

Brightness controls the percentage of white in the colors or shades of gray in the image. Setting the brightness to 0% makes the image black, and 100% brightness makes the image white. White areas of the image are not affected by brightness settings.

You can also use the **Picture Corrections** options in the **Format Picture** pane to make corrections. In addition to the preset percentages for **Sharpen/Soften** and **Brightness/Contrast**, you can drag the slider or use the spin box to specify the percentage by which you wish to change the setting.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Apply Image Corrections.

ACTIVITY 1–2

Adjusting Image Corrections Options

Before You Begin

My Newsletter.docx is open.

Scenario

The photo of the abandoned house requires a few adjustments to improve its appearance. You will adjust its brightness, contrast, and sharpness.

1. Use the **Corrections** options to adjust the brightness and contrast of the image.
 - a) In left column on page 1, select the house image.
 - b) On the **Picture Tools Format** tab, in the **Adjust** group, select **Corrections**.
 - c) Hover over each of the options in the **Brightness/Contrast** section to see a live preview of how each affects the image.
 - d) Select a brightness and contrast option that you think makes the image look the best.
2. Use the **Corrections** options to sharpen the image.
 - a) Make sure the house image is still selected.
 - b) On the **Picture Tools Format** tab, in the **Adjust** group, select **Corrections**.
 - c) Hover over each of the options in the **Sharpen/Soften** section to see a live preview of how each affects the image.
 - d) Select a sharpness option that you think makes the image look the best.
3. Save the document.

Color Options

The **Color** gallery enables you to change color settings for color saturation and color tone, and to modify the color of the image. Color saturation changes the intensity of a color as a percentage of the color. Color tone controls how light or dark a color is. Color tone is expressed as a temperature.

Another **Color** gallery option is to display the **Format Picture** task pane and control the color properties directly rather than using any of the preset options. You can also make a color transparent in the image by using the **Set Transparent Color** option.

If you need to make changes at a more granular level than the preset options provide, you can open the **Format Picture** task pane and make changes in the **Picture Color** section.

Recolor Gallery

The **Recolor** gallery enables you to apply built-in stylized effects that change the color of your picture. You can turn the image into grayscale or sepia, give it a blue tint, or use several other preset color options.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Adjust Image Colors.

ACTIVITY 1–3

Adjusting Image Color

Before You Begin

My Newsletter.docx is open.

Scenario

You have already made a few improvements to the house picture in your document. To give the photo a "historical" appearance, you will recolor it to make it look like an older photo.

1. View the color saturation presets.
 - a) Select the house image.
 - b) On the **Picture Tools Format** tab, in the **Adjust** group, select **Color**.
 - c) Hover over various preset options to preview their effect.
2. Recolor the house image as black and white.
 - a) In the **Recolor** section, select **Grayscale** or **Sepia**.

These options create the appearance of an old black and white photo.
 - b) Save the file.

The Artistic Effects Tool

Through the **Artistic Effects** tool, you can apply effects that make the image appear to be a drawing, a painting, or a sketch. Pointing to an **Artistic Effects** option shows you a preview in the document of how the image will look with that effect applied.

Picture Styles

Word includes a **Picture Styles** gallery that enables you to format the edges of the pictures you insert. The gallery has a variety of edge styles, from a simple white frame to one that displays the photo with a bevel perspective.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Apply Artistic Effects and Picture Styles.

ACTIVITY 1–4

Applying Artistic Effects and Picture Styles

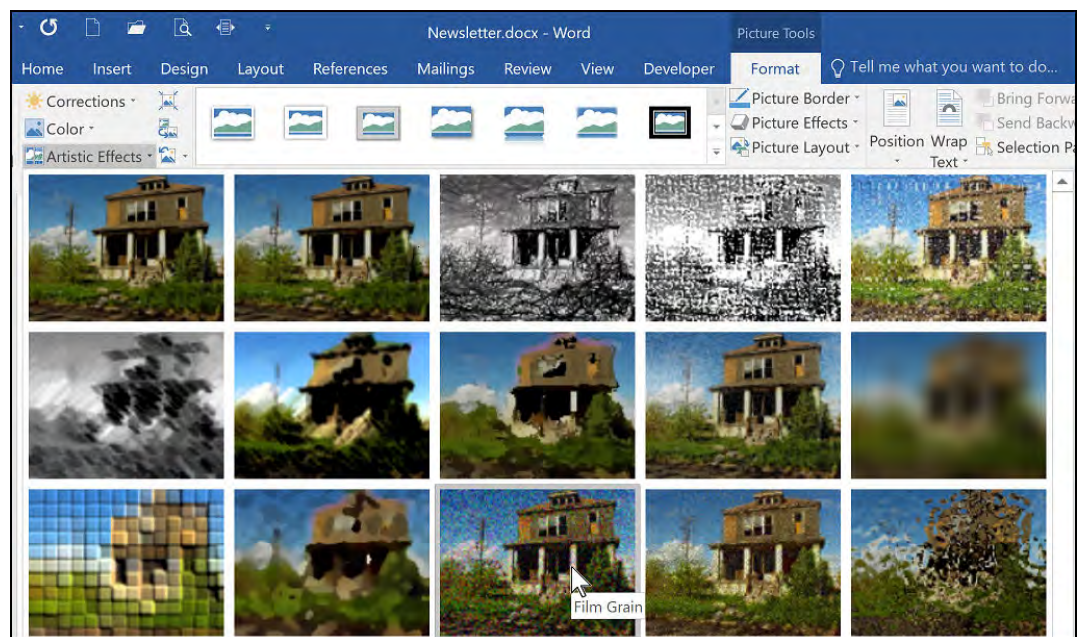
Before You Begin

My Newsletter.docx is open.

Scenario

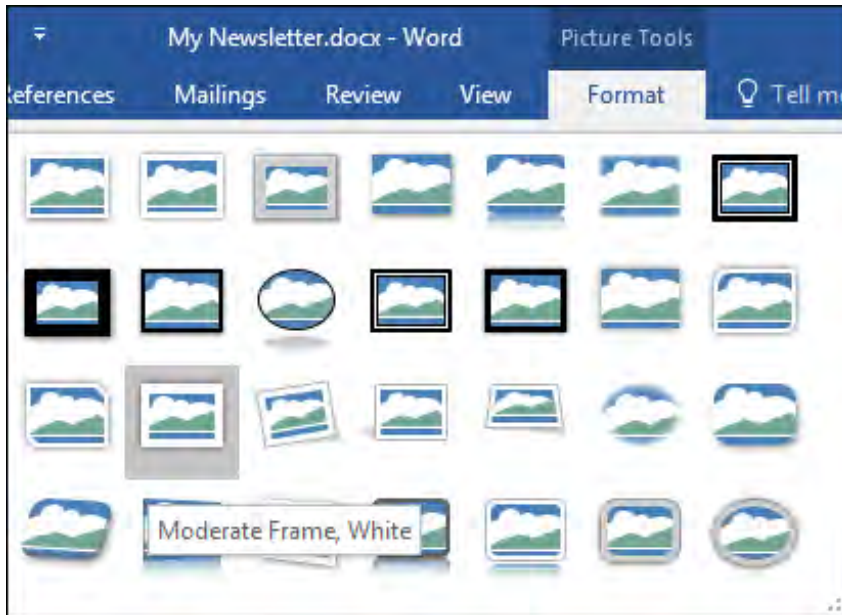
You will give the house photo film grain and a white border, like an old snapshot.

1. Apply the **Film Grain** artistic effect to the house photo.
 - a) Select the house photo.
 - b) On the **Picture Tools Format** tab, in the **Adjust** group, select the **Artistic Effects** button. Word displays a palette of artistic effects you can apply to the photo.
 - c) Hover over the available artistic effects to see how Word changes the house photo.
 - d) Select the **Film Grain** artistic effect.



2. Apply a **Picture Style** to the house photo.
 - a) With the house image selected, on the **Picture Tools Format** tab, in the **Picture Styles** group, select the **More** button for the **Picture Styles** gallery.
 - b) Hover over each of the options to see a live preview of how each affects the image.

- c) Select the **Moderate Frame, White** style.



- d) Click outside the image to deselect it.
 e) Examine the right edge of the photo.
 The edge is cropped because the image with the border now added is a bit too wide to fit completely in the column.
 f) Select the image, and drag its lower-right corner to the left, until it is narrow enough to display the right edge of the photo border.
 g) Click outside the image to deselect it.

Trolley Street Celebration



The Trolley Street site as it appeared in 1995.

Fifteen years ago, Dr. Patsy Heald, a professor of Mathematics at Greene College, approached the college board with her vision of a partnership between the college and Greene City Building with Heart.

The project captured the imagination of the board, and the college soon donated a site on Trolley Street. Faculty, staff, and students signed up as builders, and a site was selected for the first project. The rest is history.

Rios and their twin sons, Sal and Rosetta Krieg, Alice Guthrie, Shelly Schwartz, Marion and Bernie Ross, and Jay Nufrick.

Several family members delivered a short speech. Other speakers included Bill Rosen, current Director of Building with Heart and owner of Zev's Diner; Tammy Hager, Mayor of Greene City; Nancy Elliot, President of Greene City Board of Real Estate Agencies; and Dr. Laurel Perry, Associate Director of Project VITAL and Community Liaison for Thurman Greene Memorial Hospital.

Many stories were told about the thousands of hours of hard work contributed by volunteers through which the projects were successfully completed. While there were some tears in the crowd as homeowners shared how their lives were changed, some were laughing so hard they cried as Mayor Hager shared a hilarious collection of funny stories (complete with "blooper" movies, in some cases) that



volunteers have shared with us over the years.

Dr. Heald, former Director of the Building with Heart Trolley Street project and current Director of Development, recounted the project's original vision and

3. Save the document.

Compression

The **Compression** option reduces the color format of an image, making the file size smaller. The color information takes up fewer bits for each pixel without losing image quality. The compression is expressed as pixels per inch, or ppi.

There are several preset compression options you can select based on what you plan to do with the document. The default is 220 ppi, which is the **Print** setting. If the image and document will be viewed on a screen, such as on a web page, you can set the **Compression** to **Screen**, which is 150 ppi. If the purpose of the document is to email it, set the **Compression** to **E-mail**, which is 96 ppi.



Caution: Be aware that compressing an image is irreversible. For this reason, you should always save an original copy of the image that is separate from the compressed version in your document.



Access the Checklist tile on your **CHOICE** Course screen for reference information and job aids on **How to Apply Image Compression**.

ACTIVITY 1–5

Compressing Pictures

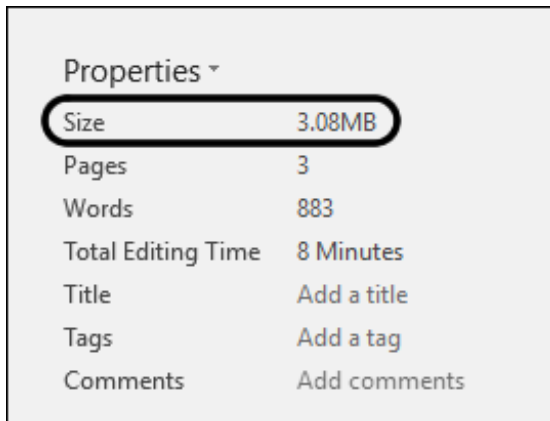
Before You Begin

My Newsletter.docx is open.

Scenario

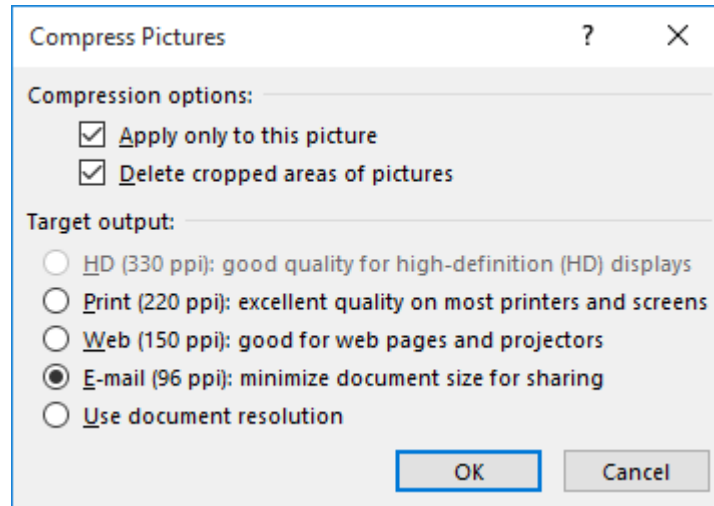
In preparation for publishing the newsletter through email and the web, you would like to reduce the file size.

1. Note the current document's file size.
 - a) Select **File**. Record the size of the file shown in the **Properties** area.




- b) Press **Esc** to return to the document.
2. Reduce the file size.
 - a) Make sure the picture of the house is selected.

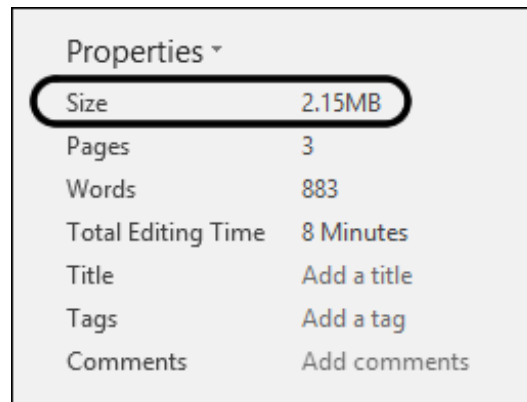
- b) On the **Picture Tools Format** tab, in the **Adjust** group, select **Compress Pictures**.



- c) Select **E-mail (96 ppi): minimize document size for sharing** and then select **OK**.
3. See how much disk space was saved.
- a) In the **Desktop\Projects\Manipulating Images** folder, save the document as **My Email Format Newsletter.docx**.

 **Note:** Word does not display the change in file size from compressing the house photo until you save the document.

- b) Select **File**. Compare the size of the file now to what it was before you compressed the images.



- The file is smaller. Compressing images can save considerably on the document size.
- c) Press **Esc** to return to the document.
-

TOPIC C

Insert Other Media Elements

Word enables you to add a link to an online video without needing to open the source location.

Video Links

You can insert a link to an online video in your Word 2016 document. While this is not very useful in printed documents, for documents you share online, it is quite a handy feature. You can select the link and view the video right in the document without the need to open a browser, access the site where it is hosted, and then view the video.

The video is shown as a still frame with a **Play** button on top of the image. When the user selects the video, it opens in a window on top of the Word document. To return to the document, the user just needs to press **Esc** or click in the main document outside of the video frame.



Note: It is a good idea to add text near the video to let readers know what the video is about.

The Insert Video Dialog Box

There are two ways to select the video to include in your document. If you have the *embed code* for a website video, you can enter it in the **From a Video Embed Code** text box.

You can also search the web for a video. If you need to search for the online video, use the **Bing Video Search** text box to enter terms by which to search for the video. Videos matching your search term are shown as thumbnail images that you can select.

Video Links in Web Documents

When you save a Word document to a web format such as HTML or PDF, video links will be converted to a still image of the video with a link to the video URL. When a user selects the still image, their web browser will open the video.

The Screenshot Tool

The **Screenshot** tool on the **Insert** tab enables you to take a snapshot of anything displayed on your computer screen. After you take the screenshot, it is automatically inserted into your document. This is useful when you are creating documentation on how to perform a procedure.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Insert Other Media Elements.

ACTIVITY 1–6

Inserting a Video Link

Scenario

You will provide a link to an online YouTube video in the newsletter, including a thumbnail image of the video.

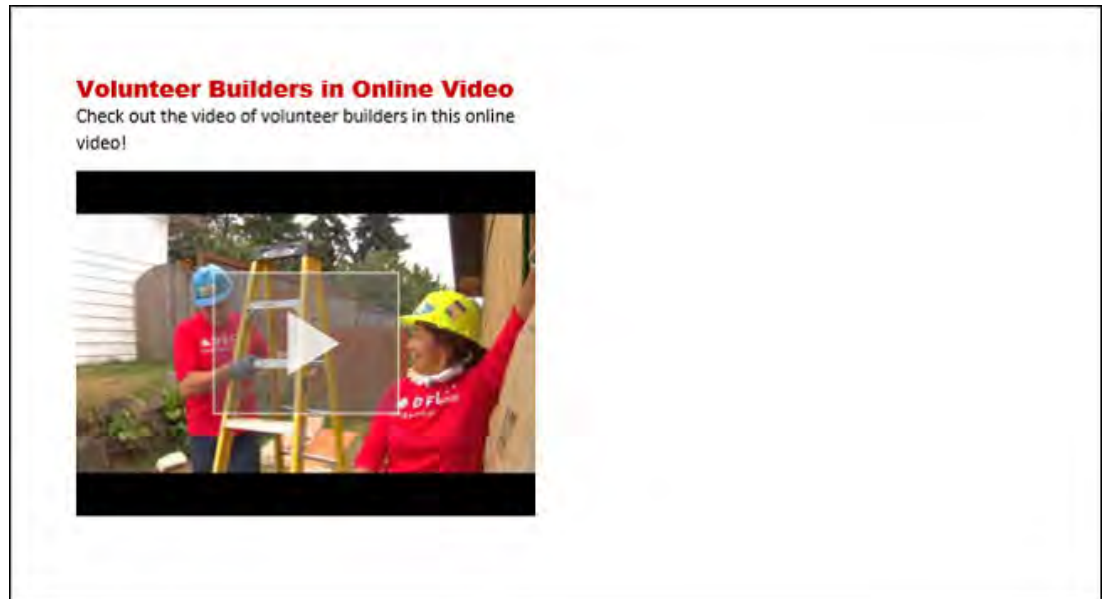


Figure 1–8: Video embedded in the newsletter.

1. Insert a link to a YouTube video.
 - a) Press **Ctrl+End** to move the insertion point to the end of the document.
 - b) Select **Insert→Media→Online Video**.
 - c) In the **Search YouTube** text box, type *volunteers build home* and press **Enter**.
 - d) Select one of the videos found in the search and then select **Insert**.

A preview of the video is inserted into the document.
2. Test the video.
 - a) Select the **Play** button on the embedded video.

The video opens in an overlay on top of the current document.
 - b) Select the **Play** button in the video window.
 - c) After viewing a few seconds of the video, press **Esc** to return to the document.
 - d) Save and close the file.

Summary

In this lesson, you used various features in Word to enhance images and embed media elements.

How will you determine when to use Word's image enhancement features and when to enhance images in an image editing program before importing them into Word?

What sorts of video links might you embed in your own documents?



Note: Learn strategies for improving the graphic design of your Word documents by accessing the LearnTO **Design Attractive Word Documents** presentation from the **LearnTO** tile on the CHOICE Course screen.



Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

2

Using Custom Graphic Elements

Lesson Time: 1 hour

Lesson Objectives

In this lesson, you will:

- Create text boxes and pull quotes.
- Add WordArt to a document.
- Draw shapes.
- Add complex illustrations by using SmartArt.

Lesson Introduction

In addition to robust image-processing capabilities, Word also includes extensive drawing and graphics capabilities. Custom graphic elements enable you to position text boxes at any location or orientation in your document, and add a wide variety of shapes. WordArt adds visual appeal to headings, and SmartArt automates the creation of structured diagrams within your document. All of these can be combined to create striking documents.

TOPIC A

Create Text Boxes and Pull Quotes

Text boxes and pull quotes enable you to set off text from the rest of the document. Text boxes can be used to help you organize the content on a page to keep information all on a specific page, add an annotation to a chart or image, or place text in a specific location in the document.

Text Boxes

A *text box* is a Word object that enables you to place text anywhere in your document. Text boxes can be resized to meet your needs. You can format the text and graphics within the text box as you would any other text or graphics. The text box itself can also be formatted with background colors and borders, if desired. You can wrap text around a text box.

Pull Quotes and Sidebars

If you have text that you want to emphasize or use as a teaser, you can copy and place the text in a predefined type of text box referred to as a *pull quote*. Pull quotes are usually placed in a bordered text box that is aligned to the text as indicated in the **Text Box, Built-In** gallery item descriptions.

A *sidebar* typically contains supplemental text to support the text in the document. Preformatted sidebars are included in the **Text Box, Built-In** gallery.

The Text Box Gallery

The **Text Box** gallery contains regular text boxes, pull quotes, and sidebars that have been formatted with various alignments, styles, colors, and borders. They contain some placeholder text that you replace with your own text.

You can also add text boxes, pull quotes, and sidebars to the **Text Box** gallery. After you make the desired changes to an object, you can add it to the **Text Box** gallery.

The Drawing Tools Format Contextual Tab

You can reformat any of the built-in gallery items by using the **Drawing Tools Format** tab options to meet your organization's style guidelines. There are several ways you can format text boxes from this tab:

- Draw a text box.
- Add shapes to the text box or change the text box shape.
- Change the shape style, fill color, and outline, and add shadows and 3-D effects.
- Change the text direction and alignment.
- Create a link between two text boxes.
- Configure the position, text wrapping options, and alignment options of the text box.
- Set the height and width of the text box.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Create Text Boxes, Pull Quotes, and Sidebars.

ACTIVITY 2-1

Creating a Text Box

Data File

Desktop\Projects\Using Custom Graphic Elements\Poster.docx

Scenario

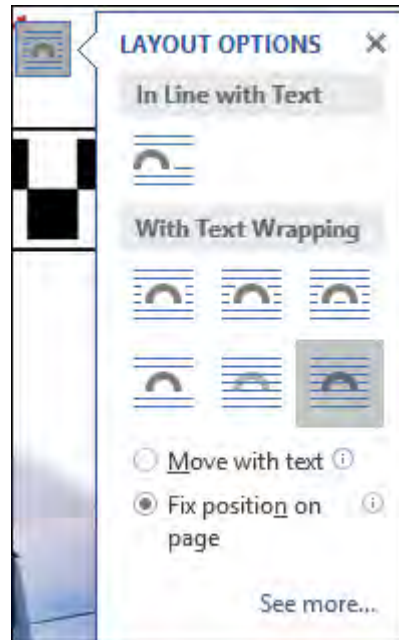
You have started developing a poster for a fundraising event and have several elements that you need to add. You will start by adding some text to a logo image. Rather than writing the text directly within the document area, it will be easier to position precisely where you want it if you place it in a text box.



Figure 2-1: Text box superimposed on logo image.

1. Create a text box.
 - a) From the **Desktop\Projects\Using Custom Graphic Elements** folder, open **Poster.docx**.
 - b) Make sure the document is shown in **Print Layout**.
 - c) On the **Insert** tab, in the **Text** group, select **Text Box**.
 - d) Select **Simple Text Box**.
A text box is dropped onto the page.
 - e) Type ***Of Greene City, Richland***
2. Format the text box's text wrap and positioning options.
 - a) Make sure the text box is still selected.

- b) Select the **Layout Options** button next to the text box.



- c) Select **In Front of Text** to position the text box so that it appears in front of the "Building with Heart" logo.
- d) Select **Fix position on page** to anchor the text box on the page.
- e) Close the **Layout Options** pane.
3. Format the text box's style.
- a) Make sure the text box is still selected.
- b) On the **Drawing Tools Format** tab, in the **Shape Styles** group, select the **More** button to show the **Shape Styles** gallery.
- c) In the **Presets** group, select **Transparent - Black, Dark 1**.



- d) Drag across the text **Of Greene City, Richland** to select it.
The selection rectangle around the text box changes from a solid line to a dotted line.
- e) On the **Home** tab, in the **Font** group, select the Font Color **Red**.
- f) On the **Home** tab, in the **Font** group, select **Bold**.
4. Position the text box.
- a) Press **Esc** to deselect the text, but leave the text box selected.
The selection rectangle around the text box changes from a dotted line to a solid line.

- b) With the text box selected, press the arrow keys or drag the text box to position it as shown.



5. Save the document in the current folder (Desktop\Projects\Using Custom Graphic Elements) as *My Poster.docx*

TOPIC B

Add WordArt and Other Text Effects

You have used text boxes and shapes to make information stand out in your document. Another way to make information stand out or to separate one section of information from another is to use WordArt, which enables you to apply dramatic special effects to text.

WordArt

WordArt is text that is treated like a drawing object. A set of special formatting options can be applied to WordArt, providing much greater flexibility in formatting than font and style options alone provide. Word includes a gallery of WordArt styles with decorative effects like fills, shadows, and texture.

Text Effects

Text Effects are dramatic formatting and structural treatments that you can apply to WordArt.

<i>Treatment</i>	<i>Description</i>
Shadow	Apply drop shadows and 3-D perspective effects to text, as though the text is illuminated by an external light source.
Reflection	Make text appear to reflect from the page, like a mirror.
Glow	Apply an effect similar to shadow, except that the shading flows in every direction from the text as though the text itself is a light source.
Bevel	Apply 3-D edges and corners to text.
3-D Rotation	Rotate the text in space.
Transform	Make text follow a curved path or stretch the text as though it is laid out on a 3D object, such as a wave or arch.

Drop Caps

Text at the beginning of a paragraph can be formatted with *drop cap*. Drop cap formats the first letter in a paragraph to descend beyond a single line and sometimes in a different font. This special format option is located on the **Insert** tab, in the **Text** group. There are two predefined drop cap styles, **Dropped** and **In margin**. You can also configure the drop cap to specify the font for the drop cap letter, how far the letter descends, and how close the text is to the drop cap.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Add WordArt and Other Text Effects.

ACTIVITY 2-2

Adding Text Effects to a Document

Before You Begin

My Poster.docx is open.

Scenario

You will add a title above the photo of the car. The title will follow a curved path to match the oval of the photo.



Figure 2-2: Text along a curved path.

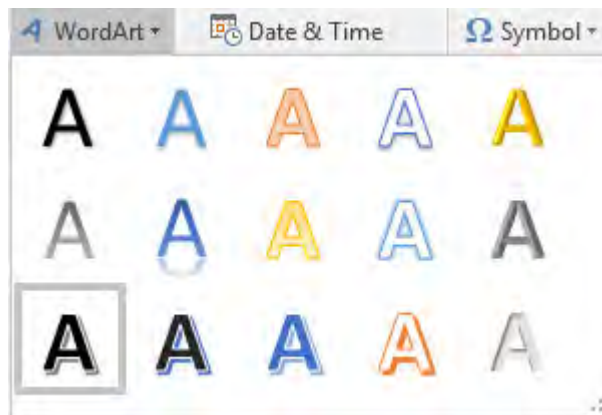
1. Create a title as WordArt.

- a) Click just above the photo to position the insertion point as shown.



The selected paragraph is centered on the page.

- b) On the **Insert** tab, in the **Text** group, select **WordArt**.
- c) From the **WordArt** gallery, select **Fill – Black, Text 1, Outline - Background 1, Hard Shadow - Background 1**.



- d) Type *Cruise-in and Car Show*

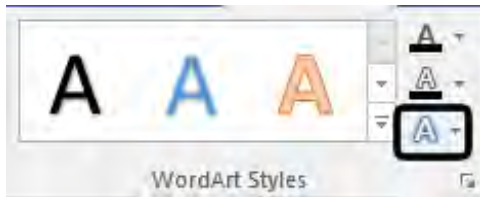
- 2. Size the text box to fill the document width.

- a) Drag the right center selection handle to the right, until the text box extends from margin to margin, as shown.

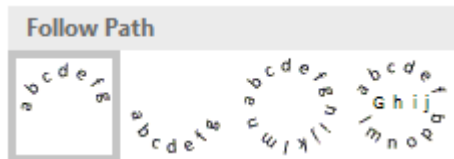


- 3. Arch the text along a path that matches the top curve of the photo.

- a) On the **Drawing Tools Format** tab, in the **WordArt Styles** group, select **Text Effects**.



- b) Select **Transform**.
c) In the **Follow Path** group, select **Arch Up**.



The WordArt text now has a slight arch to it. You can increase the height of the arch by making the WordArt text box taller.

- d) Drag the bottom center handle of the text box down until the curve of the text complements the top curve of the photo, as shown.



- e) On the **Home** tab, from the **Font** group, select **Broadway** or another font that you like.
f) Press the arrow keys or drag the text box to reposition the title where you like it.

4. Save the document.

TOPIC C

Draw Shapes

You have added text boxes and WordArt to your document to make information stand out. Another way that you can make information stand out is to draw shapes in your document, which is what you will do in this topic.

You can add shapes to a document to make information stand out, add an arrow to direct attention to important information, or create a row of graphics to separate sections of a document. Drawing tools contain predefined shapes that you can add to your document.

Shapes in Word

A *shape* is a geometric figure you can add to a document. Shapes are located on the **Insert** tab, in the **Illustrations** group. Shapes are sized when they are inserted in the document—the cursor changes to a crosshair, which you drag to create the size and dimensions of the shape. Text can be added to the shape. You can format the color and line styles of the shape. Use the sizing handles to resize and rotate shapes.

Types of Shapes

Some shapes you insert in your document are straight sided, some are curved, and some are drawn free-form. Some shapes contain connectors that you use to combine shapes with each other.

The Drawing Canvas

When you need to manipulate a group of shapes as a single entity, you can insert a *drawing canvas* in the document. By default, a drawing canvas is not inserted when you insert a shape. Insert a drawing canvas from the **Shapes** gallery. You can edit each item on the drawing canvas separately. All objects on the drawing canvas are treated as a single entity for doing things like text wrapping. You can move all of the objects at once by moving the drawing canvas.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Draw Shapes.

ACTIVITY 2–3

Drawing Shapes

Before You Begin

My Poster.docx is open.

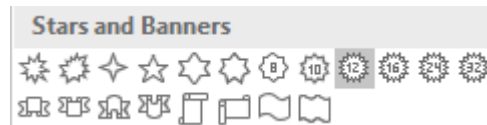
Scenario

You will add a blue ribbon to the poster to call attention to the fact that cars will be judged and awarded prizes at the fundraising event. Since there isn't a single ribbon shape, you will develop your own from three of the shapes provided in Word.




Figure 2–3: Poster with the blue ribbon graphic.

1. Add a yellow starburst shape to the document.
 - a) Press **Ctrl+Home** to position the insertion point at the beginning of the document.
 - b) On the **Insert** tab, in the **Illustrations** group, select the **Shapes** drop-down.
 - c) In the **Stars and Banners** section, select the **12 pointed star**.



- d) Drag the mouse pointer to draw a star like the one shown here.



- e) Drag a corner handle if you need to resize the star.
2. Add text in the starburst shape.
 - a) Right-click the shape and select **Add Text**.
-  **Note:** You can also just start typing to insert text into the starburst shape (as long as you still have the shape selected).
- b) Type *Prizes Awarded!*
3. Set the star colors and border.
 - a) On the **Drawing Tools Format** tab, in the **Shape Styles** group, select **Shape Fill**.
 - b) Select **Yellow**.
 - c) In the **Shape Styles** group, select **Shape Outline**.
 - d) Select **Black**.
 - e) In the **Shape Styles** group, select **Shape Outline**.
 - f) Select **Weight→3 pt**.
 - g) Press **Esc** so that the shape is selected, but not the text within the shape.
The shape should have a solid rectangle around it, not a dotted rectangle.
 - h) On the **Home** tab, in the **Font** group, select **Font Color→Black**.
 - i) On the **Home** tab, in the **Font** group, select **Bold**.

- j) If necessary, resize the star so the text fits on two lines, and the shape is fairly round.



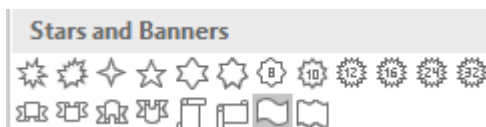
4. Rotate the star.

- a) Drag the rotation handle above the star to the left to rotate the star slightly, as shown.



5. Add a blue ribbon.

- a) Press **Ctrl+Home** to position the insertion point at the beginning of the document.
 b) On the **Insert** tab, in the **Illustrations** group, select the **Shapes** drop-down.
 c) In the **Stars and Banners** group, select the **Wave** shape.



- d) Drag to create a wave shape as shown.



- e) Set the **Shape Fill** color to **Blue**.
6. Reconfigure the ribbon's size and position.
- a) Rotate, resize, and move the shape as shown.



7. Duplicate the ribbon.
- a) Select the blue ribbon.
- b) Press **Ctrl+D**.

- c) Rotate the new ribbon and move it so the tops of the two ribbons are together as shown.



8. Layer and group the parts of the ribbon.
- Select the yellow star shape.
 - On the **Drawing Tools Format** tab, in the **Arrange** group, select the arrow next to **Bring Forward** and select **Bring to Front**.
 - While holding down **Shift**, select one of the ribbons.
The ribbon and the star are now both selected.
 - While holding down **Shift**, select the other ribbon.
Both ribbons and the star are now selected.
 - From the **Arrange** group, select **Group**→**Group**.
The entire ribbon assembly will now behave as a single shape.
9. Apply a drop shadow.
- On the **Drawing Tools Format** tab, in the **Shape Styles** group, select the arrow next to **Shape Effects**.
 - Select **Shadow**. In the **Outer** group, select **Offset Diagonal Bottom Right**.
10. Adjust the drop shadow settings.
- In the **Shape Styles** group, select the arrow next to **Shape Effects** and select **Shadow**→**Shadow Options**.
 - In the **Format Shape** pane, increase the **Blur** to **12 pt** and the **Distance** to **9 pt**
11. Adjust the ribbon layout.
- If necessary, resize, rotate, and move the ribbon assembly until you are pleased with the poster layout.



Note: Sometimes when you select a grouped object, you may inadvertently select one of its parts. If you have trouble selecting the entire ribbon group, click outside the ribbon to deselect it. Then click within the ribbon to select it again.

12. Save and close the document.

TOPIC D

Create Complex Illustrations with SmartArt

You have worked with various shapes, lines, text boxes, and other graphic elements in Word documents. Some complex illustrations such as organizational charts or flowcharts combine multiple shapes with connecting lines. It can be difficult to create and add to these types of illustrations. Word includes complex graphic objects that are composed of multiple shapes with connections between them. Resizing the object resizes all of the components, maintaining the relationship between them. In this topic, you will use SmartArt to create complex illustrations.

SmartArt Graphics

A *SmartArt* graphic is a predefined graphic object laid out to enable you to illustrate things such as a process, hierarchy, cycle, or the relationship between items in the illustration. The **SmartArt** gallery includes multiple layouts for each type of SmartArt. You can add text to the graphic to illustrate your process or concept.

If the initial layout does not match the style of the rest of your document, you can format the shapes, text, and any images in the SmartArt graphic. You can also switch between layouts, retaining the text you entered into the original graphic. When you add content in the text pane, the SmartArt graphic is updated to add or remove shapes as needed.

The Choose a SmartArt Graphic Dialog Box

The **Choose a SmartArt Graphic** dialog box contains three panes. From the left pane, you can select the type of SmartArt graphic to show in the center pane. If **All** is selected in the left pane, each category begins with a title. In the following figure, **All** is selected and **List** is the category currently displayed in the scrollable center pane. The right pane shows a preview and description of the selected SmartArt graphic.

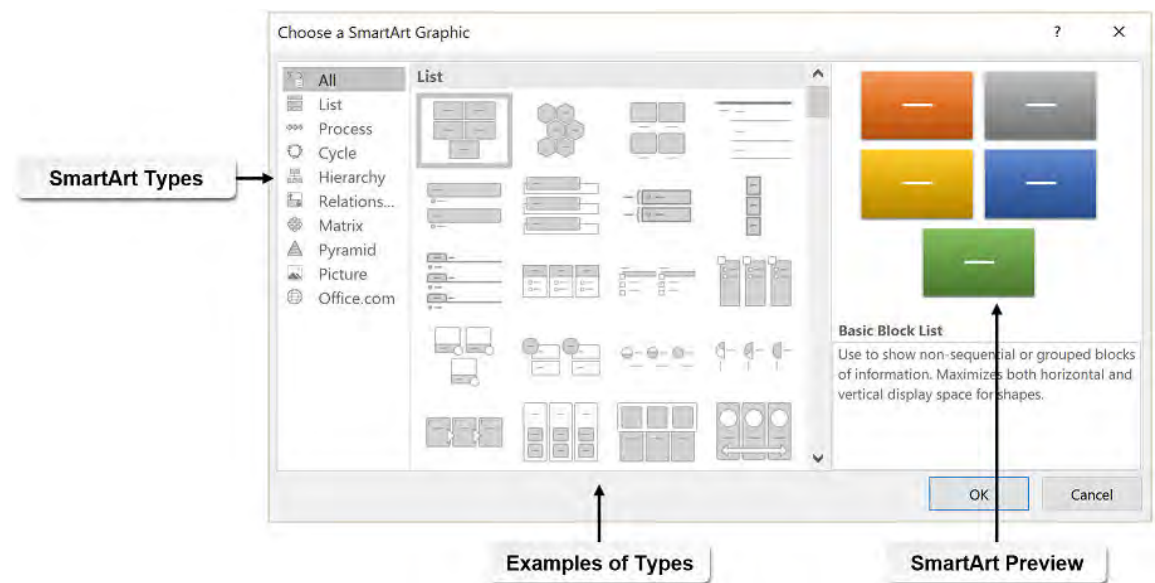


Figure 2–4: The Choose a SmartArt Graphic dialog box.

SmartArt Graphic Categories

Microsoft® created several categories of SmartArt graphics to help you match an illustration style to the type of content you're trying to represent. The following table describes the purpose of each category.

<i>SmartArt Category</i>	<i>Use When You Want to Illustrate</i>
List	Information that is non-sequential.
Process	The steps or events in a process or timeline.
Cycle	A process that continues in a circular manner.
Hierarchy	A hierarchical, tiered relationship or a decision tree.
Relationship	How components connect with each other.
Matrix	How components are related to a whole entity.
Pyramid	Proportional, interconnected, or hierarchical relationships.
Picture	Images such as photos in relationship to other images or text.

The SmartArt Contextual Tab

When you select a SmartArt object, the **SmartArt** contextual tab is activated. It contains two tabs, **Design** and **Format**.

From the **SmartArt Tools Design** tab, you can make changes to your SmartArt graphic:

- Add or delete shapes.
- Change the layout.
- Change the colors of the entire graphic.
- Apply a SmartArt style.
- Reset the graphic to the original settings.

From the **SmartArt Tools Format** tab, you can make formatting changes to your SmartArt graphic:

- Change shapes.
- Increase or decrease the size of the SmartArt graphic.
- Change shape and WordArt styles.
- Arrange text and graphics with positioning and word wrap settings.
- Specify a specific height and width for the graphic.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Create Complex Illustrations with SmartArt.

ACTIVITY 2–4

Creating Illustrations with SmartArt

Data File

Desktop\Projects\Using Custom Graphic Elements\HouSalvage Fact Sheet.docx

Scenario

You will add an image to illustrate the classic "reduce, reuse, recycle" cycle, adapted by adding "rebuild" to show how the HouSalvage stores fit within this model of conservation.

Shop at HouSalvage

HouSalvage provides a great selection of home goods, building supplies, appliance, furniture and many other awesome, one of a kind finds! HouSalvage stores are a haven for do-it-yourselfers, landlords, and interior decorators. You never know what you'll find, and our inventory changes daily, so stop by often. HouSalvage helps you save money and find things you can't find anywhere else. And when you buy from HouSalvage, you'll be contributing to the Build with Heart program.

Check out our newest HouSalvage store at 349 Main Street in Greene City. We're open Monday through Saturday from 8:00 am to 5:00 pm. Come and see our great new building, and be prepared to find some great deals on building supplies, furniture, and appliances.

Donate to HouSalvage

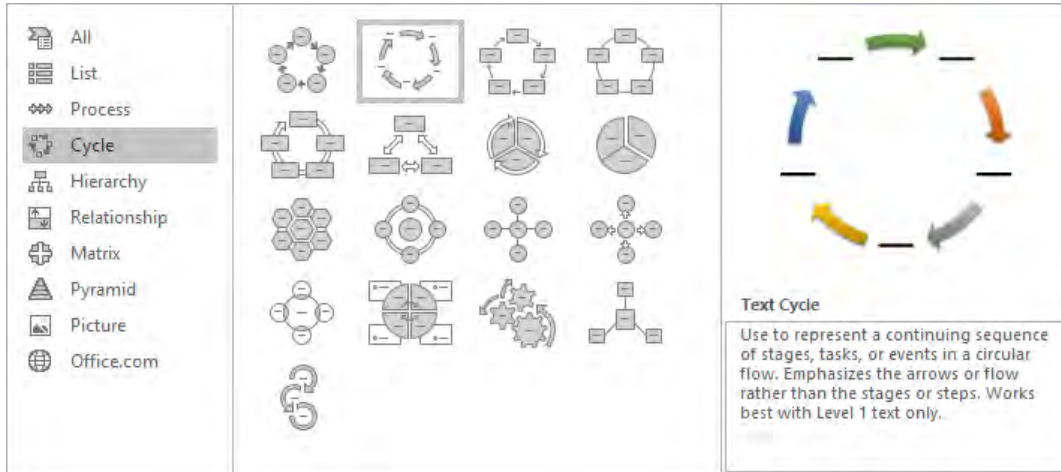
Donating to HouSalvage is easy, reliable, and tax-deductible. Contact us to schedule a free donation pick-up today, or drop off your donations at your nearby HouSalvage store. Below is a list of items we accept. If you have any questions,



Figure 2–5: SmartArt graphic added to the document.

1. Open the fact sheet document.
 - a) From the **Desktop\Projects\Using Custom Graphic Elements** folder, open **HouSalvage Fact Sheet.docx**.
2. Create a Cycle type SmartArt graphic.
 - a) On page 1, position the insertion point before the subheading "Shop at HouSalvage."
 - b) Select the **Insert** tab.
 - c) In the **Illustrations** group, select **SmartArt**.
 - d) In the left pane, select **Cycle**.

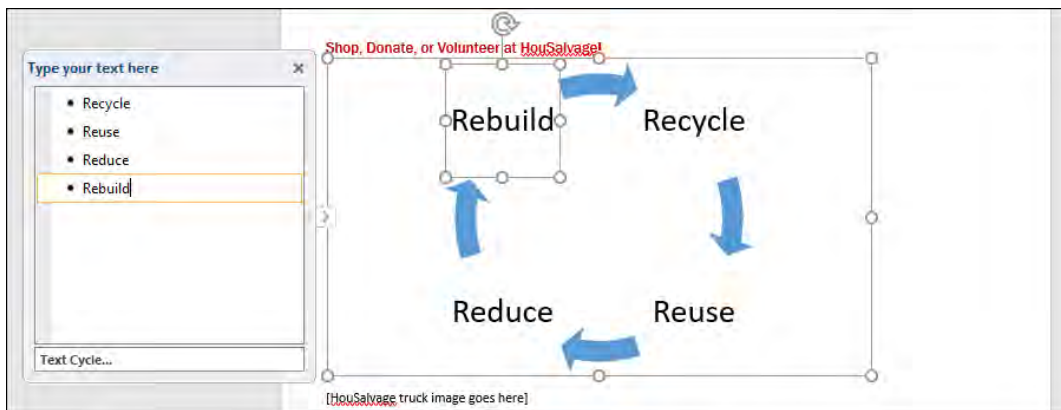
e) Select **Text Cycle**.



f) Select **OK**.

3. Enter text in the text pane.

- a) If the **Type your text here** pane is not displayed, select the arrow control on the left side of the graphic.
- b) Press **Delete** until all empty bullets have been deleted from the list.
- c) In the **Type your text here** pane, type text in each of the bullets as shown, pressing **Enter** at the end of each item to advance to the next bullet.

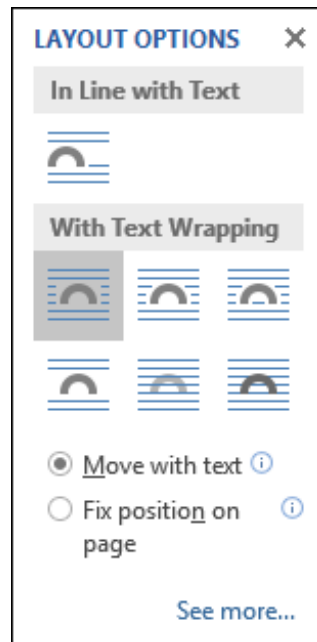


d) Close the **Type your text here** pane.

4. Adjust the SmartArt box layout.

- a) Click outside of the SmartArt box to deselect it, and then click the white space in the SmartArt box to select it again.
A **Layout Options** button appears when you reselect the SmartArt box.

- b) Select the **Layout Options** button. Select **Square** and make sure that **Move with text** is selected.




- c) Close the **Layout Options** pane.
- d) Size and position the SmartArt graphic as shown. To size the graphic proportionally, hold down the **Shift** key, point to one of the bottom corners of the graphic, and click and drag to make the graphic smaller.

Shop, Donate, or Volunteer at HouSalvage!

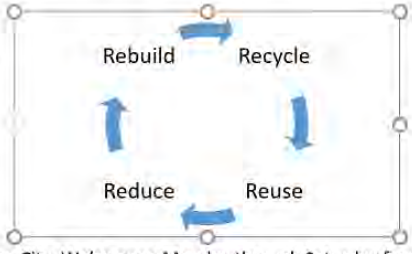
[HouSalvage truck image goes here]

HouSalvage Recycling Centers operate as a fundraising enterprise for Building with Heart. Each HouSalvage location serves as a salvage facility and storefront. Volunteers clean up, sort, and price construction materials left over from Building with Heart construction projects and donated by companies and individuals. This operation not only helps to raise funds for Building with Heart projects, it helps to keep home improvement waste out of landfills.

 **Shop at HouSalvage**

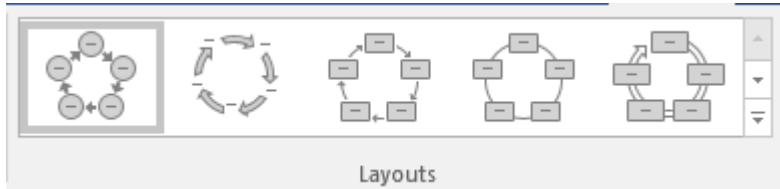
HouSalvage provides a great selection of home goods, building supplies, appliance, furniture and many other awesome, one of a kind finds! HouSalvage stores are a haven for do-it-yourselfers, landlords, and interior decorators. You never know what you'll find, and our inventory changes daily, so stop by often. HouSalvage helps you save money and find things you can't find anywhere else. And when you buy from HouSalvage, you'll be contributing to the Build with Heart program.

Check out our newest HouSalvage store at 349 Main Street in Greene City. We're open Monday through Saturday from 8:00 am to 5:00 pm. Come and see our great new building, and be prepared to find some great deals on building supplies, furniture, and appliances.



5. Change the layout of the SmartArt graphic.
- a) With the SmartArt graphic selected, select the **SmartArt Tools Design** tab.

- b) In the **Layouts** group, select **Basic Cycle**.



A new layout is used with the same text you provided before.

- c) In the **SmartArt Styles** group, select **Change Colors**. In the **Colorful** group, select **Colorful Range - Accent Colors 5 to 6** or whatever color palette you like.



6. Save the document in the current folder (**Desktop\Projects\Using Custom Graphic Elements**) as ***My HouSalvage Fact Sheet.docx***
7. Close all Word documents.
-

Summary

In this lesson, you created several types of custom graphic objects, including text boxes, drawing shapes, and WordArt. Finally, you created a complex illustration by using SmartArt. These elements enable you to create your own custom graphic elements to make information stand out and give your document your own special look.

How might you use custom graphic elements when creating documents for your organization?

Are there any times you might use SmartArt? If so, for what?



Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

3

Collaborating on Documents

Lesson Time: 50 minutes

Lesson Objectives

In this lesson, you will:

- Prepare a document for collaboration.
- Mark up a document.
- Review tracked changes.
- Compare document changes.

Lesson Introduction

For many of the Word documents you create, you may be the only person making changes to the document. Other times, you will need to work in a collaborative environment where others will provide feedback and document changes. In this lesson, you will use Word features that make this shared work more efficient.

TOPIC A

Prepare a Document for Collaboration

You've created a document, and you want to solicit feedback and revisions from your colleagues. Doing this requires that you have a way to share copies of the document with other users, keep track of their revisions and comments as they add them to their copy of the document, and merge their revisions into your original copy of the document.

Document Sharing

There are numerous ways to share Word documents, as shown here.

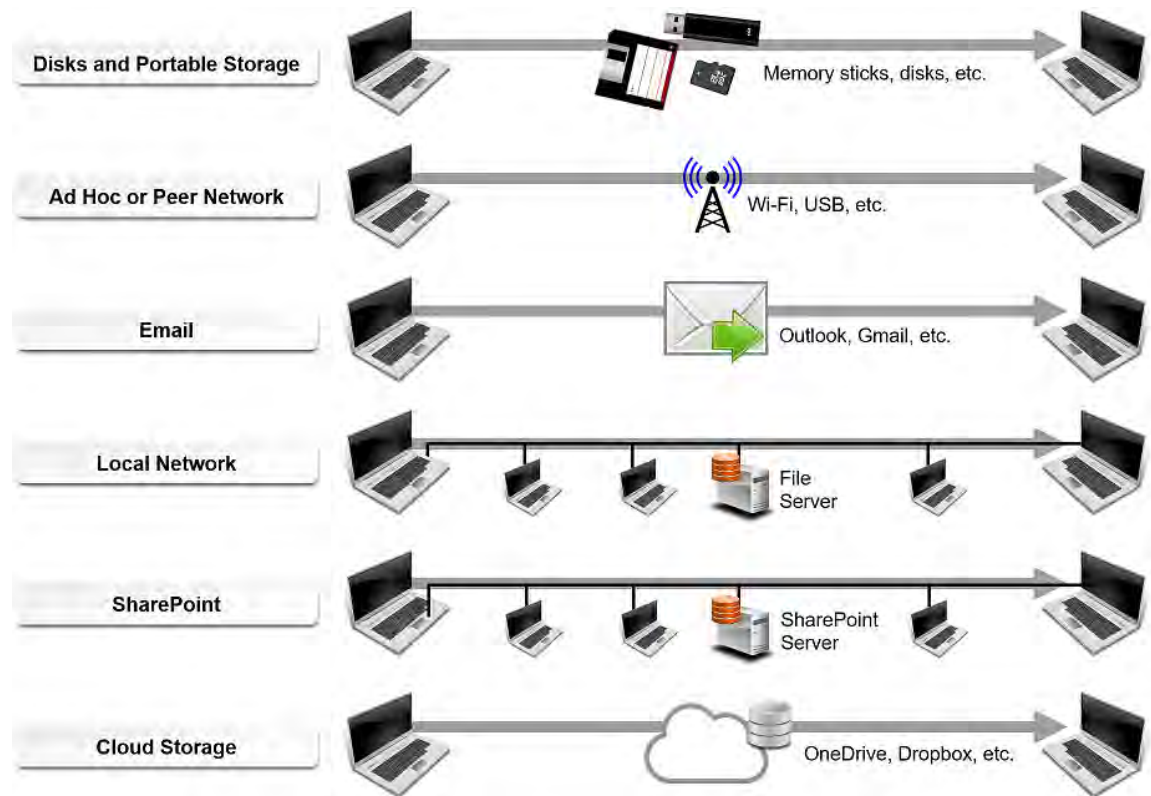


Figure 3-1: Various ways to share a Word document.

The following table details a number of these sharing techniques.

Sharing Technique	Description
Disks and portable storage devices	Portable storage devices such as floppy disks have long been used as a simple means to share Word documents from one computer to another. While many computers no longer include floppy disk drives, the modern equivalent of these devices are the portable Universal Serial Bus (USB) drives and Secure Digital (SD) cards that make it easy to share files between devices.
Ad hoc or peer network	Many of today's computers and mobile devices include the capability to set up a temporary connection with another device through USB, Wi-Fi, or other wireless connections for the purpose of file sharing.

Sharing Technique	Description
Email	<p>When you email a document from within Word, the file is added to the message as an email attachment. When you select Share→Email→Send as Attachment, Word opens your email client software and attaches the document to a new message. This feature works with most email client software, such as Microsoft® Outlook® or Mozilla® Thunderbird®.</p>
Local network	<p>A local area network connection, typically made through Wi-Fi or wired Ethernet, can be used to share files. Files can be copied directly from one computer to another if at least one of the computers has File Sharing enabled. Or files can be shared indirectly by using a file server as a go-between.</p>
SharePoint®	<p>Expanding on the simple file-sharing capability of a file server, a SharePoint server provides finer control over file sharing and a wide variety of additional features to support collaboration, such as keeping a history of file revisions so users can easily revert back to any previous version of a document.</p>
Cloud storage	<p>OneDrive® and other cloud storage services, such as Dropbox and Google Drive™, provide cloud-based storage that is automatically synchronized with local storage. Because you can share cloud storage locations with other users, cloud storage provides a useful and efficient way to share files. OneDrive, Microsoft's own cloud storage service, is tightly integrated with Word. For example, the Share button provides quick access to OneDrive, and provides a convenient panel to control file-sharing options. OneDrive also supports real-time collaboration.</p>



Note: Many email gateways limit the size of email attachments to a relatively small size, such as 5 or 10 megabytes, and will block email messages that exceed this size. If you send Word documents through email, be sure to verify that the document was received by your intended recipient.

Real-Time Collaboration

Real-time collaboration has been available in Office Online (cloud-based version of Word) since 2013. With Office 2016, it is now available directly within the Word application. To use it, you must store a document in a folder within your OneDrive storage that you share with other users. The Public folder in OneDrive is configured as a shared folder by default, but you might want to use a different folder and share it with specific users. For example, you can set up a folder for a specific project and share it only with other project team members.

Real-time collaboration through OneDrive provides functionality that is similar to the co-authoring capabilities supported in SharePoint, but uses OneDrive instead of SharePoint as the go-between. So even if you are a SharePoint user, real-time collaboration through OneDrive may be useful if you want to simultaneously work on a document with someone who doesn't have a user account on your SharePoint server.

When both authors are editing the same document from OneDrive, a colored insertion point appears in Word to show you where the other user is editing. Blocks of the document where the other user is working will be unavailable for you to edit, but you will be able to see the changes they make to the document.



Note: For a demonstration of how real-time collaboration works, check out the LearnTO Use **Real-Time Collaboration** presentation from the **LearnTO** tile on your CHOICE Course screen.

Multiple Versions of the Same Document

Document sharing may result in multiple versions of a document. For example, one user may make certain changes to a document while another user is simultaneously making other changes. In this case, you end up with two "latest" versions of the document. If you shared with more than one other user, you can end up with numerous variations on the same document.

Systems like Microsoft SharePoint provide features to help keep track of document versions, offering ways for a user to "check out" the document and make revisions, knowing that other users are prevented from editing the document until it is checked back in. However, even when using a system like SharePoint, there are times when you'll want to provide a copy of the document for review to someone through a less formal sharing system like email, resulting in the need to merge changes made in separate versions of the document back into a single document. Fortunately Word provides tools to facilitate this.

User Information

The **User name** property is applied to every document you create on your specific computer. When you set up your computer or switch to a new computer, it's a good idea to update the **User name** and **Initials** properties stored in Microsoft Office. This information is especially useful when you share documents with other users.

If you are logged in to a Microsoft Account, your user name will be used as the document creator/editor, and in change-tracking notes. You can tell if you are logged in to a Microsoft Account because your user name, rather than the **Sign in** link, will be shown in the upper-right corner of the window.

The **User name** and **Initials** properties you enter in Word are also used in Microsoft PowerPoint® and Excel®.

Document Properties

Document properties, also known as *metadata*, are key details about a document that are saved with the file. Some properties are editable, such as **Subject** and **Comments**. Other properties are automatically set as you work with the file, such as **Total Editing Time** and **Last Printed**. You can add custom properties to the file to capture other data.

Search by Document Properties

After you've defined the properties of a document within Word, you can use these properties to search for a document in File Explorer. Properties on which you can search include the file name, author, document tags, document type, and modification date. To search on these properties, in the **Search** box in File Explorer, type the property name followed by a colon, and then the value on which you want to search.

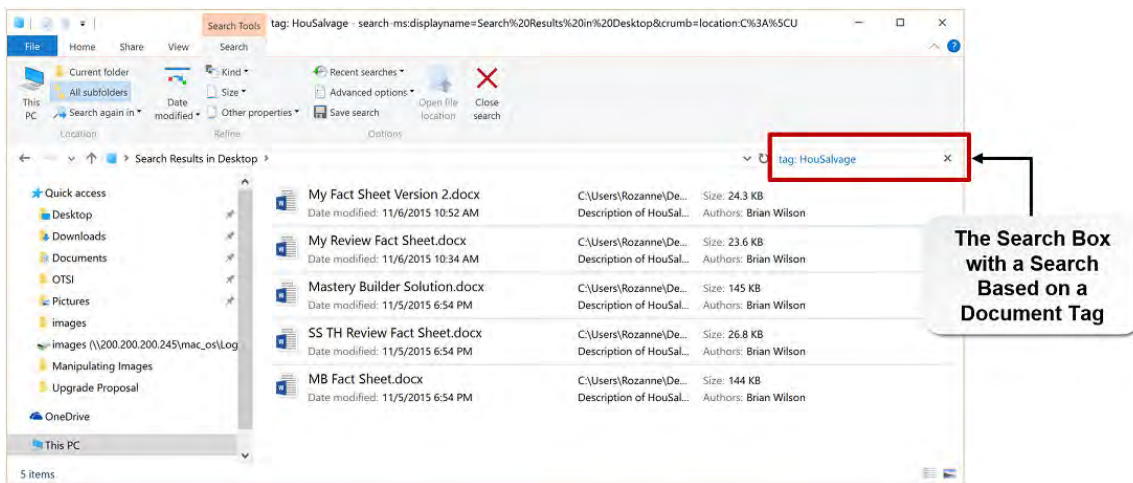


Figure 3–2: Using properties to search for a document.

The following table defines the property keywords you use in File Explorer along with an example of how to use each keyword.

<i>Property</i>	<i>Example</i>	<i>Description</i>
Name	Name: Building	Searches for all files that have "Building" in their file names in the current folder and all subfolders.
Author	Author: Brian	Searches for all files with Brian as the author in the current folder and all subfolders.
Tag	Tag: HouSalvage	Searches for all files that have the tag of "HouSalvage" that are in the current folder and all subfolders.
Type	Type: Document	Searches for all Word documents in the current folder and subfolders.
Modified	Modified: 2015	Finds all files modified in 2015 within the current folder and its subfolders.

The Backstage Info Page

Document properties are shown on the right side of the **Info** page, which you can view by selecting **File**→**Info**. By default, a subset of the document properties is shown. You can show all properties by selecting the **Show All Properties** link at the bottom of the property list.

Many of the properties are editable directly from this page. Alternatively, you can display them for editing in the **Document Properties** dialog box by selecting **Advanced Properties** from the **Properties** drop-down list.

Document Versions

By default, Word saves a temporary copy of open documents every ten minutes. In many cases, this enables you to recover work you haven't directly saved, if something like a power outage or system crash causes Word to exit without prompting you to save your work. The **Manage Document** button on the Backstage Info page enables you to manage these recovery files, providing options to display a previous version of the document, compare your document to a previous version, and roll back to a previous version.

Sharing Documents Online

Saving files you need to share with other people to OneDrive or a SharePoint Server allows you to easily give them access to the files. You and anyone to whom you gave access to the file can simultaneously access the file to open it and edit it. Documents can be edited in Word 2016, Word 2013, Word 2010, Word for Mac 2011, or through Word Web App. However, if the document contains comments or tracked changes, you need to open it in one of the supported versions of Word rather than in Word Web App.

If you have the file open and another person also opens it, a notification appears in the status bar. There is also an indicator in the document to let you know what part of the document they are editing. Another notification is displayed if a user closes their editing session.

When you are editing document content, the area you are editing is locked so that your changes aren't overwritten by someone else. As soon as you save the file, the changes you made are visible to other people.

Changes made by others are shown with a green background. The green background is removed the next time you save the file. The green background is not printed when you print the document.

If multiple people start editing the same text at exactly the same time, when you save the file you are shown the conflicts between your edits and those of anyone else who started editing the text at that exact same time. You will need to choose which edits to keep. This can also happen if someone makes edits offline and then saves the file back to the cloud.

Sharing a File

To make a file available to other people when you save it to your OneDrive account, you will need to use the **Share** command. You can give other people viewing access or editing access. You will need to specify the names or email addresses of the people with whom you wish to share the file.

Editing a Shared File

When someone shares a OneDrive file with you, you will receive an email message with a link to the file. Select the link in the email message to open the file. You can then select to edit the file in either Word or Word Web App. You will be prompted to log in to make changes to the file. The **Save** icon has a double-headed circular arrow over it when you are editing a shared document.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Share Documents.

ACTIVITY 3–1

Configuring Your User Information

Data File

Desktop\Projects\Collaborating on Documents\Review Fact Sheet.docx

Before You Begin

Word is configured to run without a Microsoft Account.

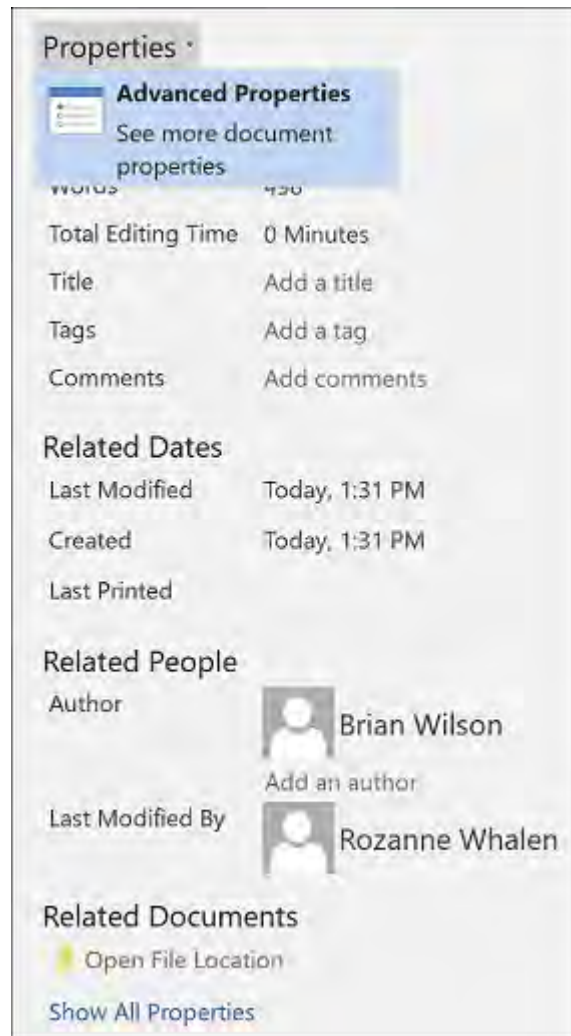
Scenario

Before you create documents that you'll share with other users, you will make sure your user information is set correctly, since that information will be used to track changes you make to the document, identify who last modified the file, and so forth. You will set document properties to help make documents more searchable.

-
1. From the **Desktop\Projects\Collaborating on Documents** folder, open **Review Fact Sheet.docx**.
 2. Change the user information and initials.
 - a) Select the **File** tab, and select **Options**.
 - b) In the **Personalize your copy of Microsoft Office** panel, in the **User name** text box, type your name.
 - c) In the **Initials** text box, type your initials, and then select **OK**.
 3. Save the source document with a different file name.
 - a) Save the document in the current folder (**Desktop\Projects\Collaborating on Documents**) as ***My Review Fact Sheet.docx***
 4. View people who have worked on the document.
 - a) Select **File**.
 - b) On the **Info** tab, in the **Related People** area, notice the **Author** and **Last Modified by** values.

The original author of this document was Brian Wilson. The last person to save the document was you. Even though you saved the file with your account and have your user name defined in **Word Options**, the original author's name is still listed with the document.
 5. Change the document properties.

- a) On the **Info** tab, from the **Properties** drop-down list, select **Advanced Properties**.



- b) In the **Subject** text box, type *HouSalvage Stores*
 c) In the **Category** text box, type *Fact Sheets*
 d) In the **Keywords** text box, type *Building with Heart, HouSalvage, Recycling*
 e) In the **Comments** text box, type *Description of HouSalvage stores, includes a list of items acceptable for donation.*

Not only might the information in these fields be helpful to other authors looking for information about the document, but it is also useful for searching in File Explorer.

- f) Select **OK** to return to the **Info** page.
 g) Press **Esc** to return to the document.

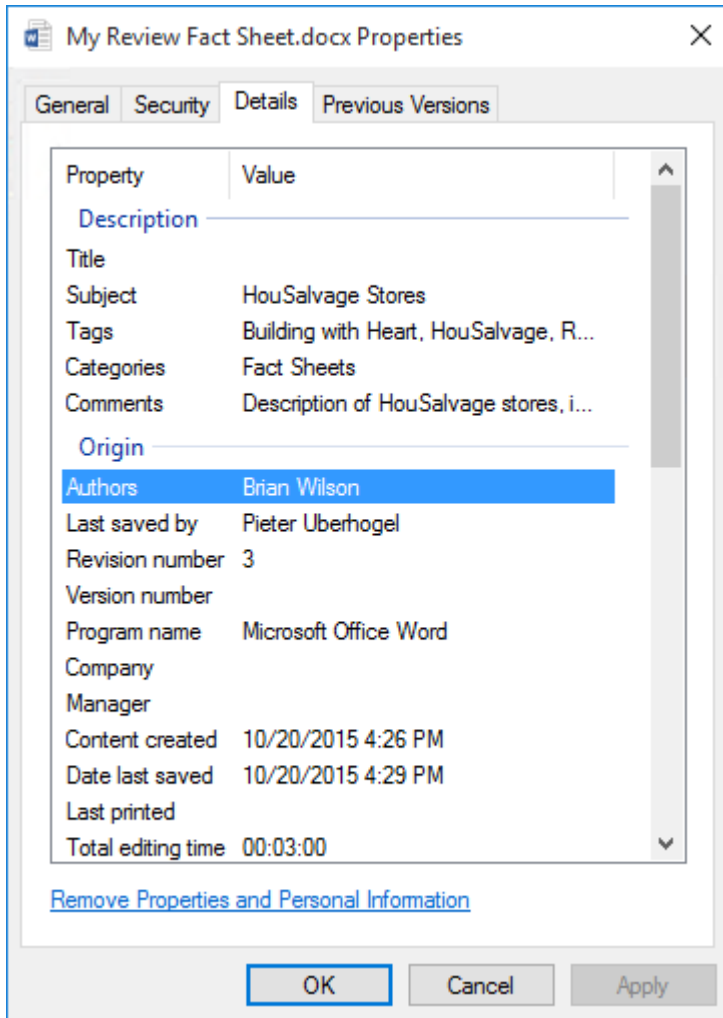
6. Save and exit.

- a) Save the document.
 b) Exit Word and close all other windows.

7. View file information in File Explorer.

- a) On the Desktop, open the **Projects** icon.
 A File Explorer window is displayed, showing the contents of the Projects folder.
 b) In the **Search Projects** text box, type *tags:housalvage*
 The My Review Fact Sheet.docx file, which includes "housalvage" within its tag field, is listed.
 c) Right-click **My Review Fact Sheet.docx** and select **Properties**.

d) Select the **Details** tab.



Even from outside of Word, you can see the properties you added.

- e) Scroll through the list of properties and values to examine the type of information available from this view and searchable from File Explorer.
- f) Select **OK** to close the **Properties** dialog box.
- g) In **File Explorer**, select **Close search** to return to File Explorer.

TOPIC B

Mark Up a Document

It's difficult to see where changes have been made by simply viewing a document. If you worked on a document months or even weeks ago, you might not remember where you modified the text. One way to show where any changes have been made to the document is by using the Track Changes feature.

Track Changes

The *Track Changes* feature enables you to see where the modifications have been made in a document. With **Track Changes** turned on, any changes you make are marked in color. When working as a team on a document, **Track Changes** can be used to show the changes as well as identify who made those changes.

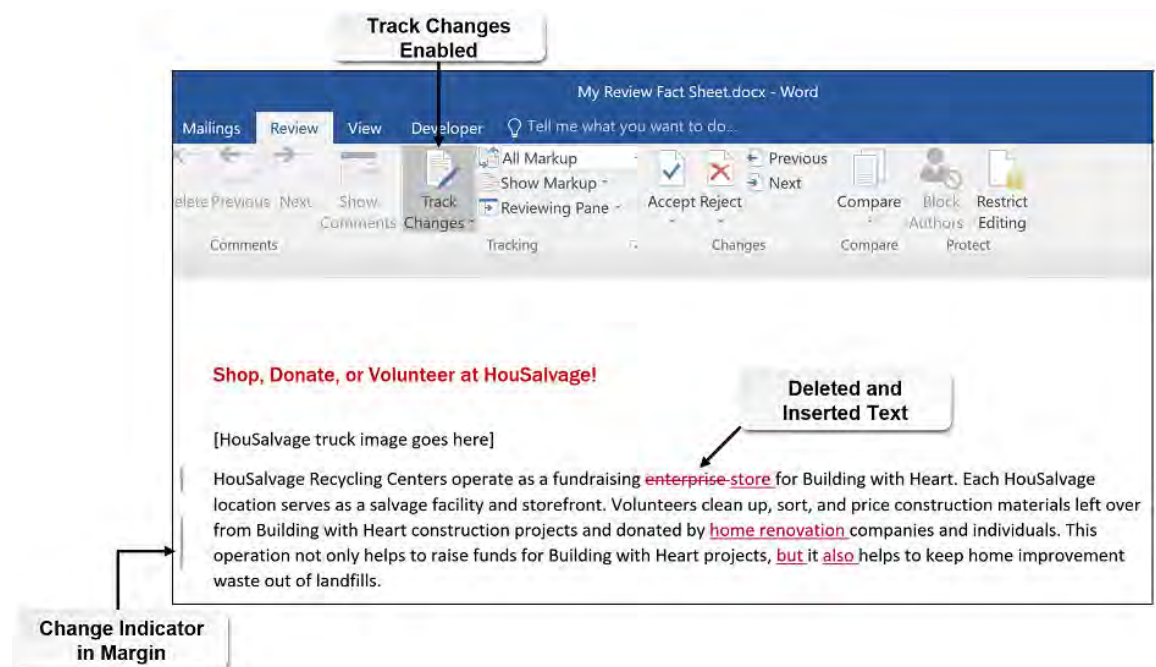


Figure 3-3: A Word document with Track Changes enabled and showing insertions and deletions.

Turn Track Changes On and Off

There are several ways to turn change tracking on or off. To turn the feature on or off, on the **Review** tab, from the **Tracking** group, select the **Track Changes** drop-down arrow and, from the list, select **Track Changes**. If the feature is on, selecting this menu choice turns it off.

You might want to turn **Track Changes** off temporarily to make adjustments that don't need to be noted, such as fixing spelling mistakes. When you turn off **Track Changes**, any previous tracked changes are saved with the file and can be redisplayed by turning **Track Changes** on again. A quick way to toggle **Track Changes** on or off is to select the top section of the **Track Changes** button where the paper and pencil are displayed.

Track Changes Options

The **Track Changes Options** dialog box enables you to customize the appearance of the modified portions of the document. You can turn tracking on or off for any moves or formatting changes. To open this dialog box, select the **Tracking** Dialog Box Launcher in the lower-right corner of the **Tracking** group.

You can select which changes to show as tracked changes. You can specify the placement of the **Reviewing** pane. You can also select whether to show balloons in **All Markup** view.

The **Advanced Options** button enables you to make changes to the colors used for various changes or to specify how changes are indicated. The dialog box is divided into five panes.

<i>Track Changes Options Pane</i>	<i>Description</i>
Markup	Formats the display of insertions, deletions, changed lines, and comments.
Moves	Tracks any move actions.
Table cell highlighting	Tracks insertions, deletions, and merged or split table cells.
Formatting	Tracks any formatting changes.
Balloons	Determines where and how balloons are used to display changes.

The Track Changes Indicator

By default, there is no **Track Changes** indicator displayed on the status bar. The only visible indicator shows up on the **Review** tab; the **Track Changes** button is highlighted when the feature is on. When the feature is off, the button has the same color as the other buttons on the **Review** tab. If you want a more obvious indication, you can add the **Track Changes** indicator to the status bar. This indicator can also be used as a button to toggle the feature on or off.



Note: The **Track Changes** indicator is a handy tool if you use **Track Changes** often. For more information on the indicator, check out the LearnTO **Use the Track Changes Indicator** presentation on your CHOICE Course screen.

Add Comments

When you make changes, you might want to add a comment about why you made the change. You might also be reviewing someone else's document and have a question for them. If your comment is a general comment, place your insertion pointer anywhere in the area around what you are commenting on. If your comment is related to specific content, select the content before creating the new comment. Comments can be displayed in a separate pane or shown as balloons in the document. Click the balloon to see the comment.

Replies to comments are indented under the original comment. Each comment's author is listed along with how long ago the comment was added to the document.



Figure 3-4: Comments in a document.

Reply to Comments

You can reply to a comment within the context of the original comment. Select the **Reply** button at the top right of the comment to reply. For example, the reviewer might have left a question for you about the content to which you want to respond. You could also use the reply feature to indicate that you made a suggested change to the content.

Mark Comments Done

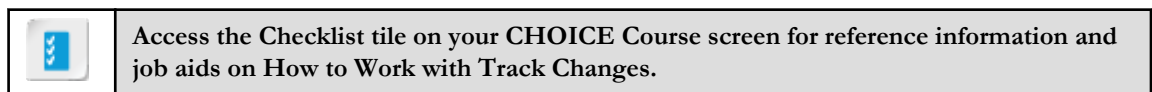
This enables you to leave the comments in the document so that there is supporting information about why a change was made.

Markup Views

There are four different ways you can view documents that contain tracked changes and comments. You can view all of the markup and comments, have just an indication that there was some change made; show none of the markup, or view the original text.

In **Simple Markup** view, changes made to the document are indicated with a red vertical line near the document margin. Comments are indicated with a balloon. If you want to view the changes, click the line. Word switches to the **All Markup** view and shows the changes that were made. To view a comment without viewing the changes, click the balloon to see the text. You can also select **Review**→**Comments**→**Show Comments**.

If you want to see what the final document will look like if you were to accept all of the changes, select **No Markup**. If you want to see the original document text, select **Original**.



ACTIVITY 3–2

Reviewing a Document

Data File

Desktop\Projects\Collaborating on Documents\Review Poster.docx

Scenario

As you work collaboratively with colleagues on a Word document, you will add some tracked changes and comments to pass back to your colleagues for review.

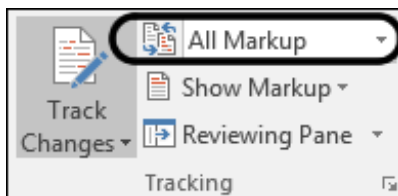
1. Enable revision tracking.

- From the **Desktop\Projects\Collaborating on Documents** folder, open the file **Review Poster.docx**.
- On the **Review** tab, in the **Tracking** group, select the **Track Changes** drop-down arrow, and select **Track Changes**.
- Note that the **Track Changes** button is now highlighted, indicating the feature is turned on.



Note: Make sure you select **All Markup** so that Word displays all insertions and deletions to the content, and also any comments.

- In the **Tracking** group, if **Display for Review** is set to **Simple Markup**, then change it to **All Markup**.



2. Add revisions to a document with **Track Changes** enabled.

- In the curved WordArt title text, select the word **and** and type an ampersand (&) to replace the selected word.
- In the third line from the bottom of the page, select the period after **contact** and delete it.

3. Add a comment.

- Press **Ctrl+Home** to position the insertion point at the beginning of the document.
- On the **Review** tab, in the **Comments** group, select **New Comment**.
- Type *Really just Greene City? Aren't we a co-sponsor?*

4. Turn off **Track Changes** and close the document.

- On the **Review** tab, in the **Tracking** group, select **Track Changes** to turn off the feature.
- Save the document in the current folder (**Desktop\Projects\Collaborating on Documents**) as *My Review Poster.docx*
- Close the document.

TOPIC C

Review Markups

In the process of reviewing the suggested changes, it might help to hide the changes from a particular reviewer or display the document as it would look in the final copy. You can adjust which reviewers and types of changes are displayed. As you work with the document, you can toggle between the marked-up copy and what the final document would look like with all the changes accepted.

Accept or Reject Changes

As you compare the changes between documents, you may not want to retain all of the suggested changes. You must select which changes to accept or reject for the final document. You can accept or reject individual changes or all changes as a group.

Buttons on the **Review** tab, in the **Changes** group, enable you to quickly navigate from one change to the next, as well as accept or reject a selected change. To navigate from change to change without accepting or rejecting it, use the **Previous** and **Next** buttons. To accept a change and automatically move to the next change, select the **Accept** button. To reject a change and move to the next change, select the **Reject** button. To accept or reject all changes, select the drop-down arrow on either the **Accept** or **Reject** button, and from the drop-down list, select the appropriate menu choice.

Multiple Reviewers

The **Combine** feature enables you to merge all the changes from multiple reviews of the same document into one. When changes are made with **Track Changes** on, the combined document contains all the changes, marking each one with the reviewer's name. Each reviewer's changes appear in a different color. When you merge the changes from more than one document, each document's revisions are appended one after another into the same document.

After you display the modifications, you can then accept or reject any or all changes without retyping the text. Comments can also be tracked to a particular reviewer.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Review Tracked Changes.

ACTIVITY 3–3

Accepting or Rejecting Changes

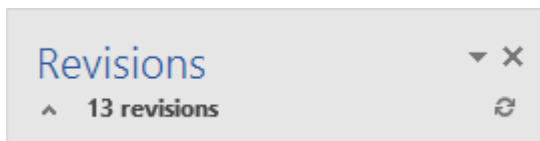
Data File

Desktop\Projects\Collaborating on Documents\SS TH Review Fact Sheet.docx

Scenario

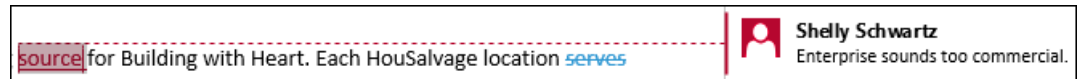
Two of your colleagues have reviewed a copy of the fact sheet. You will review their comments and markup, and incorporate changes into the document.

1. Open the document and deactivate **Track Changes**.
 - a) From the **Desktop\Projects\Collaborating on Documents** folder, open the file **SS TH Review Fact Sheet.docx**.
This document includes markup from Shelly Schwartz and Tammy Hager.
 - b) Select the **Review** tab, and in the **Tracking** group, observe the **Track Changes** button.
Track Changes was on when the document was last saved, so it is currently enabled. (This setting is associated with the document.) If you make revisions, they will be stored in the document as markup.
 - c) In the **Tracking** group, select **Track Changes** to deactivate revision tracking.
2. Accept changes in the document.
 - a) In the **Tracking** group, make sure **All Markup** is selected.
 - b) In the **Tracking** group, select **Reviewing Pane** to show the **Revisions** pane.



- The document contains 13 revisions.
- c) Observe the **Revisions** pane.
The **Revisions** pane enables you to see who made each change to the document and also read all comments in their entirety. (If there are many comments in the right margin, or the comments are too long, you won't be able to read the comments in their entirety in the right margin. Instead, you'll need to open the **Revisions** pane to display the complete comments.)
 - d) Press **Ctrl+Home** to make sure the insertion point is at the beginning of the document.
 - e) In the **Changes** group, select **Next**.
The first revision is selected. The word "enterprise" was deleted by Shelly Schwartz.
 - f) In the **Changes** group, select **Accept**.
The change is committed into the document, and it is removed from the document markup and the **Revisions** pane. The next revision is now highlighted. Shelly typed the word "source" to replace the word "enterprise".

- g) Examine the comment.



Shelly selected the word she changed and wrote a comment to explain why she made the change.

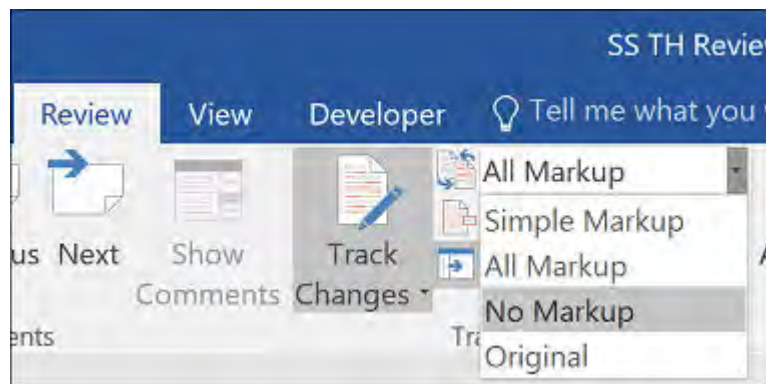
- h) In the **Changes** group, select **Accept**.

The addition of the word "source" was accepted into the document, and now the comment is highlighted.

- i) Right-click Shelly's comment, and select **Delete Comment**.
The comment is no longer needed, so you will delete it.
- j) In the **Changes** group, select **Next**.

3. Display the document as if all changes were accepted.

- a) In the **Tracking** group, from the **Display for Review** drop-down list, select **No Markup**.



- b) Examine the document.

The document appears as though all markup has been incorporated and all comments deleted.

- c) To see the markup again, select **All Markup**.

4. Accept all remaining changes and delete remaining comments.

- a) In the **Changes** group, select the **Accept** drop-down arrow, and select **Accept All Changes**.
- b) On the **Review** tab, in the **Comments** group, select the **Delete** drop-down arrow, and select **Delete All Comments in Document**.
- c) Close the **Revisions** pane.

5. Save and close the document.

- a) Save the document in the current folder (**Desktop\Projects\Collaborating on Documents**) as **My Review Fact Sheet Version 2.docx**
- b) Select **File→Close** to close the document but remain in Word.

TOPIC D

Merge Changes from Other Documents

While Word's Track Changes feature provides a great way to collaborate on document revisions, unfortunately not everyone thinks to use it, or they might not know how to use it. If someone just makes changes to a copy of your document without tracking the changes, you can still easily identify what they've changed if you still have your original document. Word provides features that enable you to quickly identify all of the changes between two or more versions of the same document.

Legal Blackline

The *Legal Blackline* feature displays the differences between two similar versions of one document. The documents being compared are not modified but visible on the screen for reference. The changes can be incorporated into the original document, the revised document, or into a new document.

Although Word includes support for Legal Blackline, it is simpler to use Track Changes instead. This is because the **Review** tab contains commands that enable you to move from one tracked change to the next, and to accept or reject each change. In contrast, Legal Blackline just displays the differences between the two documents, and you can only accept all changes or reject all changes. You can't accept or reject each difference between the two compared documents.

Comparison Settings

There are several options you can use to customize how you see any changes to the text. You can modify the default set of comparison settings to suit your needs. The **Compare Documents** dialog box contains all of the settings used to mark the differences in the two documents. To display a particular type of change, check the appropriate check box. In the dialog box's **Show changes** panel, you determine which document to display the changes in.

Original and Revised Documents

When comparing two version of a document, Word requires you to designate one as the original document and the other as the revised document. Before selecting the files, consider which changes you want to see marked up in the combined document. In the combined document, Word marks only where the revised document does not match the original. This might not give you the results you want.

For example, suppose you and a coworker start with the same document and both make changes in separate files. In your copy of the file, you format a list with bullets but your coworker does not. Now you compare the files, selecting your document as the original and your coworker's as the revised document. In the new combined document, the list is marked as a format change with *Normal, No bullets or numbering* because it differs from the designated original even though she didn't change the formatting. At this point, if you accept all changes in the combined document, the bullet formatting will be lost because your coworker didn't make that modification. If you want to retain all your changes and see how your document differs from the other file, designate your file as the revised document. If you select the original and revised documents and then want to switch them, in the center of the **Compare Documents** dialog box, select the **Swap** button.

Revisions Pane

When you compare documents, by default the **Revisions** pane is displayed to the left of the window. This pane includes a summary of the changes made and identifies who made the changes

and exactly what changes were made. You can close this pane if you need more screen space to see the compared document, original document, and revised document.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on **How to Combine Changes Made in Separate Documents**.

ACTIVITY 3–4

Merging Changes in Separate Documents

Data File

Desktop\Projects\Collaborating on Documents\BW Revised Fact Sheet.docx

Before You Begin

Word is running. You have reviewed the markup in SS TH Review Fact Sheet.docx and have saved the revised document as My Review Fact Sheet Version 2.docx.

Scenario

You have already incorporated feedback to the fact sheet that was provided to you through Word's Track Changes feature, and you have saved the updated fact sheet as My Review Fact Sheet Version 2.docx. Now another reviewer has provided you with a copy of the fact sheet document that he revised (**BW Revised Fact Sheet.docx**). Unfortunately, he made the changes without activating Track Changes. You can't use Track Changes to see what he changed, but you can use Word's Compare feature to compare his document to yours, and choose which of his changes you'd like to incorporate into your document.

1. Compare your document with a separate revised document.
 - a) On the **Review** tab, in the **Compare** group, select **Compare→Compare**.
 - b) In the **Compare Documents** dialog box, from the **Original document** drop-down list, select the file **My Review Fact Sheet Version 2.docx**.
This document appears in the list because you recently opened it.
 - c) In the **Revised document** panel, select the **Browse** button. Browse to **Desktop\Projects\Collaborating on Documents**, select the file **BW Revised Fact Sheet.docx**, and select **Open**.
When you select the **Open** button, Word returns you to the **Compare Documents** dialog box.
2. Compare the documents.
 - a) Select **More** to display additional comparison settings.
 - b) If necessary, in the **Show changes** panel, under **Show changes in**, select **Revised document**.
 - c) Select **OK**.



Note: You should see the **Compared Document**, **Original Document**, and **Revised Document** panes. If you see only one document pane, then on the **Review** tab, select **Compare→Compare→Show Source Documents→Show Both**.

- d) On the **Review** tab, in the **Tracking** group, in the **Display for Review** drop-down list, make sure **All Markup** is selected.
- e) Examine the screen layout.
 - The **Compared Document** pane shows the original fact sheet (My Review Fact Sheet Version 2.docx) with revisions added in from the revised document (BW Revised Fact Sheet.docx).
 - Revisions are shown as if the Track Changes feature had been used.
 - For your reference, the original and revised documents are shown in smaller panes next to the **Compared Document** pane.



Note: It's okay to close the original and revised documents.

3. Accept or reject changes.
 - a) On the **Review** tab, in the **Changes** group, select **Next**.

The first change in the document (deletion of "Shop, Donate, or Volunteer at") is highlighted.
 - b) In the **Changes** group, select **Reject**.

The next change (addition of "Contribute to") is highlighted.
 - c) In the **Changes** group, select **Reject**.
 - d) In the **Changes** group, select the arrow beneath **Accept** and select **Accept All Changes**.

 4. Save the document in the current folder (**Desktop\Projects\Collaborating on Documents**) as ***My Final Fact Sheet.docx***
-

Summary

In this lesson, you saw how to work more efficiently in a collaborative environment using tools to track and review changes made to a document. To ensure your changes are attributed to you in the document properties, you saw how to modify the user information. As you compared and combined document changes, you learned how to accept or reject modifications to create a final copy of the document. You also shared a document by using OneDrive to enable coauthoring of the document.

What document properties might you use in your organization?

How might you use Track Changes in your work?



Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

4

Adding Document References and Links

Lesson Time: 1 hour, 15 minutes

Lesson Objectives

In this lesson, you will:

- Add captions to illustrations and tables.
- Provide cross-references to support navigation within a document.
- Insert a bookmark to support quick navigation back to a particular location in a document.
- Insert a hyperlink to support navigation to content outside the document.
- Insert footnotes and endnotes.
- Provide citations and a bibliography to reference external information sources.

Lesson Introduction

Word documents can become quite complex, consisting of a large array of tables, figures, footnotes, endnotes, and other supporting components, including references and links to other publications. Word provides a variety of features for managing these references and links.

TOPIC A

Add Captions

Many types of publications always include a caption for every picture or graphic that supports the text. This caption provides descriptive information about the illustration. If there are several graphical items in a long document, numbering them will make it easier to refer to them in the text. You could manually type your own captions, but when a graphic is inserted or removed, you would need to update all of the caption numbers. Microsoft® Word enables you to automatically number captions for figures, tables, or equations that update as items are added or deleted.

Captions

A *caption* is a phrase that describes a visual object, such as a picture, table, or equation. The caption includes the title and a brief explanation of the significance of the illustration. The caption can appear above or below the object. Captions are automatically numbered. The numbering is added as field codes. When you add a new caption, Word automatically updates all caption numbers. However, if you delete or move a caption, the caption numbers do not update automatically. To update the field codes, including caption numbers, press **F9**.

Caption Dialog Box

The **Caption** dialog box enables you to add and format the caption. The position and numbering formats selected when creating the first caption are applied to the subsequent objects of the same label type.

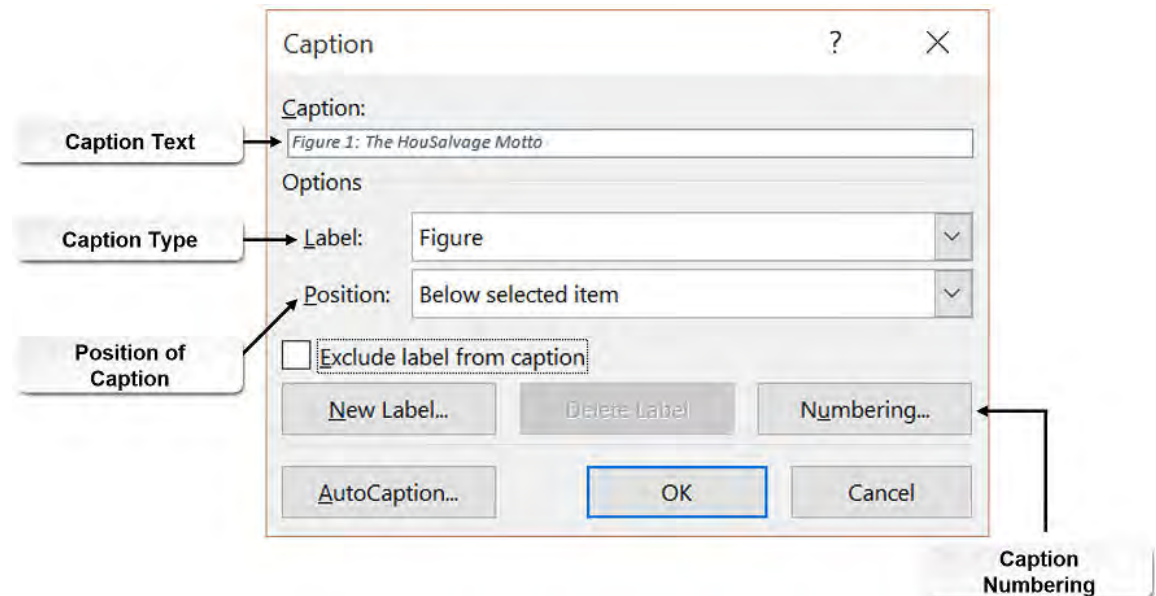


Figure 4-1: The Caption dialog box.

The **Caption** dialog box provides several options for creating captions.

<i>Caption Option</i>	<i>Description</i>
Caption	Enables you to insert the caption text. The caption title is determined by the label and numbering format.

Caption Option	Description
Label	Enables you to select the type of caption, such as table, figure, or equation. This label is added to the Caption text box.
Position	Enables you to position the caption above or below the object.
Exclude label from caption	Removes the label at the beginning of the caption text.
New Label	Opens the New Label dialog box, where you can designate a customized label type.
Delete Label	Enables you to delete a customized label from the caption without removing the caption text.
Numbering	Opens the Caption Numbering dialog box, where you can change the numbering format used in the caption.
AutoCaption	Opens the AutoCaption dialog box, which enables you to automatically add captions when new objects are inserted.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Add Captions.

ACTIVITY 4-1

Adding Captions

Data File

Desktop\Projects\Adding Document References and Links\Risk Assessment.docx

Scenario

You are creating a document that explains the organization's risk assessment process to new managers. The document will become quite long and will contain numerous tables and figures. You will add captions to a graphic and a table that can be used to provide navigation links within the document and support generating a list of references later on.

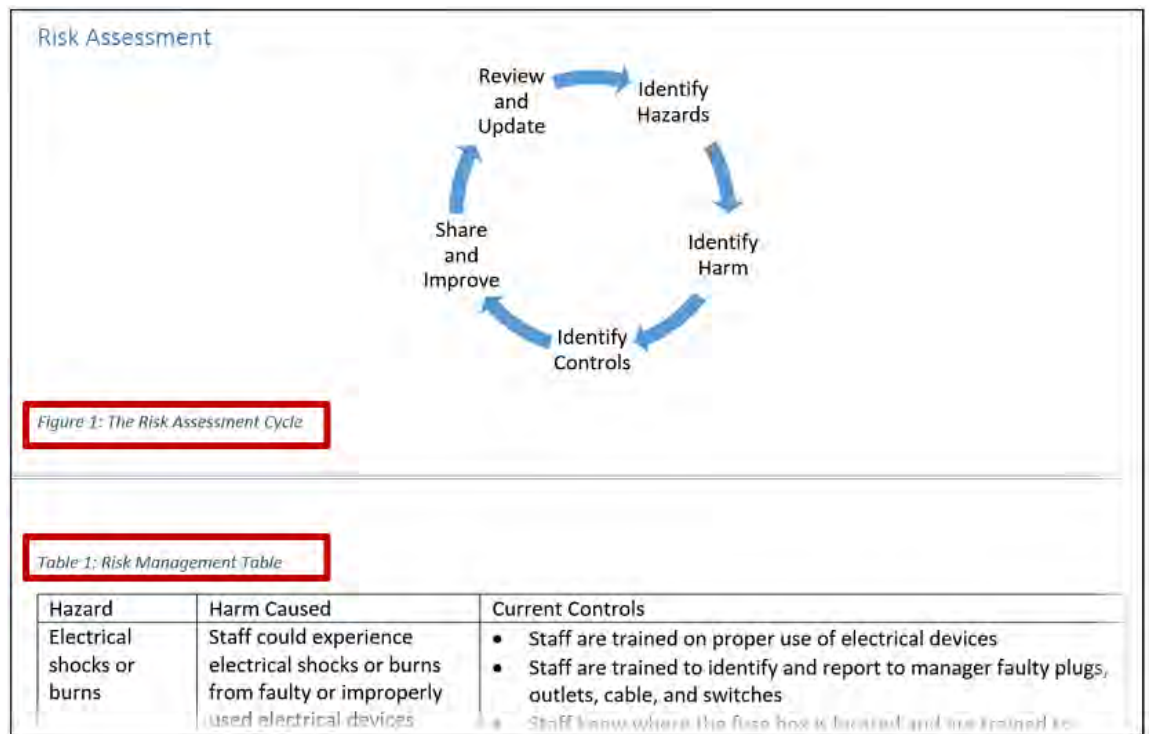


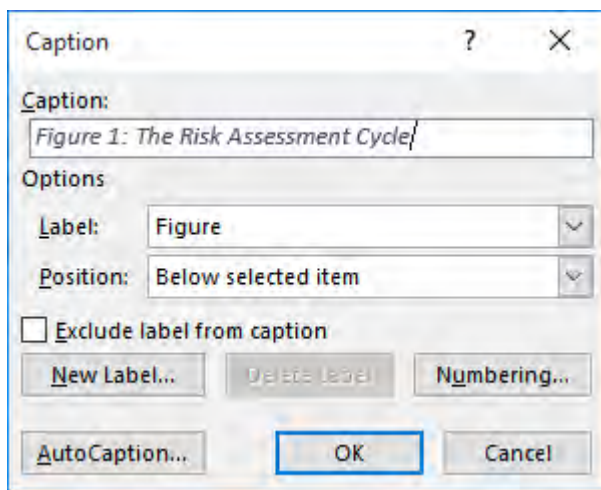
Figure 4-2: Captions added to a figure and a table.

1. Add a caption to a graphic.
 - a) From the Desktop\Projects\Adding Document References and Links folder, open Risk Assessment.docx.

- b) On page 2, select the white space in the Risk Assessment graphic, as shown.



- c) On the **References** tab, in the **Captions** group, select **Insert Caption**.
 d) Edit the text in the **Caption** text box to be *Figure 1: The Risk Assessment Cycle*
 e) In the **Options** panel, from the **Position** drop-down list, make sure **Below selected item** is selected.

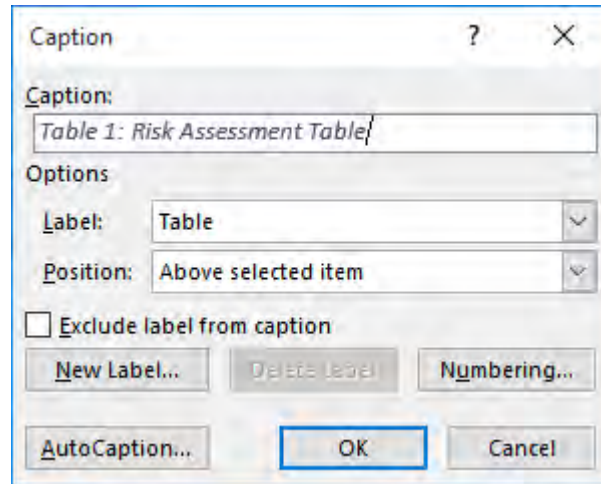


- f) Select **OK**.
 The figure caption is inserted below the image.

2. Add a caption to a table.

- a) On page 3, place the cursor anywhere in the table.
 b) On the **References** tab, in the **Captions** group, select **Insert Caption**.
 c) From the **Label** drop-down list, select **Table**.
 The table is highlighted in the document, and the value provided for **Caption** changes to Table 1.
 d) Modify **Caption** to *Table 1: Risk Assessment Table*

- e) Make sure that the **Position** is set to **Above selected item**.



- f) Select **OK**.
- g) Save the file in the current folder (Desktop\Projects\Adding Document References and Links) as ***My Risk Assessment.docx***
-

TOPIC B

Add Cross-References

A graphic or a table in a document can clarify and reinforce the information presented in the text. In longer documents, often the corresponding illustration or table does not appear on the same page as the text that describes it. Cross-references help the reader locate the proper graphic that accompanies the text. Cross-references are also useful to navigate to the figure or table.

Cross-References

A *cross-reference* directs the reader to an element that appears in another location within the document. A cross-reference can apply to text, a table, an equation, a figure, a footnote, or an endnote.

Cross-reference Dialog Box

Use the **Cross-reference** dialog box to insert and work with cross-references.

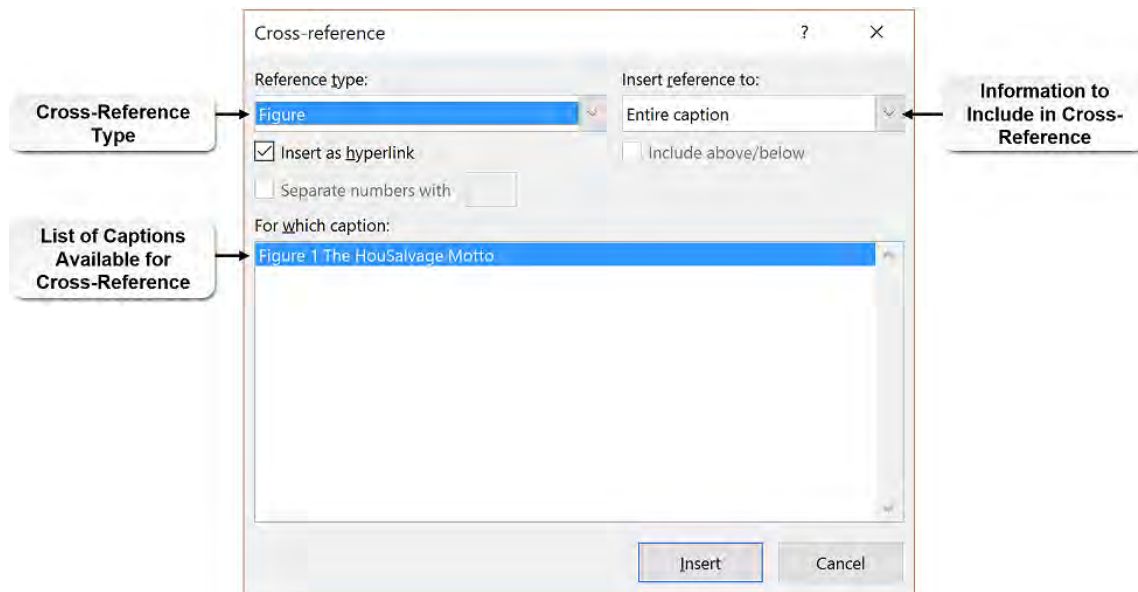


Figure 4-3: The Cross-reference dialog box.

The **Cross-reference** dialog box contains the settings for the cross-reference and other text.

Setting	Description
Reference type	Displays a list of document features that you can reference, such as headings, figures, and tables.
Insert reference to	Displays a list of items that you can include in the cross-reference. The list items shown depend on the selection in the Reference type list.
Insert as hyperlink	Enables the cross-reference to work as a hyperlink to navigate to the reference. The cross-reference does not appear underlined as a hyperlink would.

Setting	Description
Include above/below	Inserts the word <i>above</i> or <i>below</i> to the cross-reference. If you insert a page number reference with this option checked, the words <i>on page (page number)</i> are also inserted.
For which (<i>object</i>)	Lists available items based on the selected reference type. Some reference items, such as figures, require a caption before being listed in the For which list box.

Shading Cross-References

You can make cross-references and other fields stand out by having them appear shaded. Shading can make them easier to identify as fields.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Add Cross-References.

ACTIVITY 4-2

Adding Cross References

Before You Begin

My Risk Assessment.docx is open.

Scenario

The risk assessment document will be published online and in print. Since the document may become quite large, you will provide navigation links to help the user navigate. For example, when you refer to a table or figure, you will provide a link so users can navigate directly to the item being referenced.

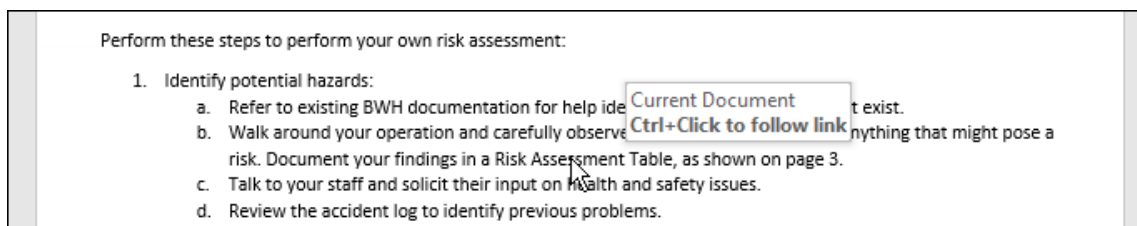
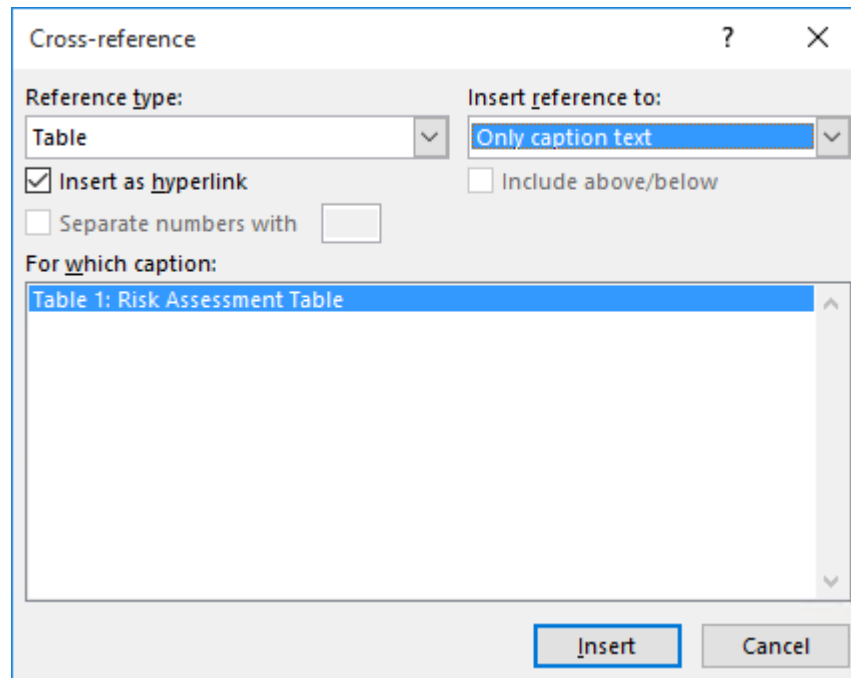


Figure 4-4: Cross reference linked to a table and showing the page number.

1. Create a cross-reference to the table.
 - a) On page 2 of the document, in the numbered list, item 1b, select the text **risk management table**.
 - b) On the **References** tab, in the **Captions** group, select **Cross-reference**.
 - c) In the **Reference type** drop-down list, select **Table**.

- d) Observe that in the **For which caption** list box, **Table 1: Risk Assessment Table** is selected.



If the document already contained other tables, there would be more items in this list to select from.

- e) In the **Insert reference to** drop-down list, select **Only caption text**.

This identifies the text that should be shown in the document. With **Only caption text** selected, just the text *Risk Assessment Table* will be shown in the document. The label and number (Table 1:) will not be shown.

- f) Select **Insert**.
g) Select **Close**.

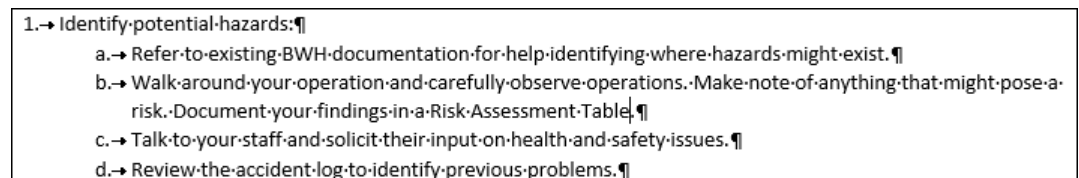
2. Examine and use the cross-reference to navigate to the table.

- a) Observe that the text you selected has been replaced by the text of the table caption, **Risk Assessment Table**.
b) Point to the cross-reference **Risk Assessment Table** to see the ScreenTip on how to use the cross-reference.
c) Press **Ctrl** and click the cross-reference.
The view shifts to the table.

3. How might the cross-reference link be more useful in a printed version of the document?

4. Insert a cross-reference with a page number.

- a) Return to the numbered list on page 2, and position the insertion point between "Risk Assessment Table" and the period following it.



- b) Type , *similar to the one shown on page*

- c) Press **Space** to add a space after the word "page".
Here you will insert a cross-reference to the page number where the table appears.
- d) On the **References** tab, in the **Captions** group, select **Cross-reference**.
- e) In the **Reference type** drop-down list, make sure **Table** is selected.
- f) In the **Insert reference to** drop-down list, select **Page number**.
- g) Select **Insert**.
- h) Select **Close**.

b. Walk around your operation and carefully observe operations. Make note of anything that might pose a risk. Document your findings in a Risk Assessment Table, as shown on page 3.

The page reference is added at the insertion point. This number will update as material is added to and removed from the document.

- i) Save the document.

Cross-Reference Updates

Cross-references do not automatically update on the screen. If you display the document with **Print Preview** or print the document, the cross-references are updated automatically. You can also manually update cross-references using **F9**.



Access the Checklist tile on your **CHOICE** Course screen for reference information and job aids on **How to Update Cross-References**.

ACTIVITY 4–3

Updating a Cross-Reference

Before You Begin

My Risk Assessment.docx is open.

Scenario

You will revise the table caption and see whether the cross-reference updates to match the revised caption.

1. Change the table caption text.
 - a) In the **Table 1: Risk Assessment Table** caption on page 3 of the document, change the word **Assessment** to *Management*



- b) Scroll up to the numbered list on page 2, and verify that the cross-reference text in item 1b did not change to match the new caption.

b. Walk around your operation and carefully observe operations. Make note of anything that might pose a risk. Document your findings in a Risk Assessment Table, as shown on page 3.

2. Update a cross-reference.
 - a) Press **Ctrl+A** to select the entire document.

Selecting the entire document enables you to update all fields simultaneously.
 - b) Press **F9** to update all fields in the selected text.
 - c) Examine the text within item **1b**.

b. Walk around your operation and carefully observe operations. Make note of anything that might pose a risk. Document your findings in a Risk Management Table, as shown on page 3.

The cross-reference link now displays the text "Risk Management Table".

- d) Save the document.
-

TOPIC C

Add Bookmarks

Scrolling through a lengthy document looking for information can be frustrating, especially if you often need to return to the same sections of text. Adding a reference to that section using a bookmark makes navigating through a long document easier. Just like you create bookmarks with a web browser to return to a specific website later, Word enables you to mark locations in your document as a navigational tool.

Bookmarks

Bookmarks are electronic markers in a document that enable you to quickly navigate to a section in the document. Bookmarks are used to mark important information that you refer to often or as a reminder of where you need to modify the document. You can bookmark a selection of text or just a location in the document.

Apart from marking sections in a lengthy document, bookmarks can also be used in a cross-reference to the bookmark's text, page number, or paragraph number. Blocks of text from other documents that have been bookmarked can also be inserted into your current document.

Bookmark Dialog Box

The **Bookmark** dialog box enables you to add, delete, and navigate to a particular bookmark. You can sort the list of bookmarks by bookmark name or location. You can also display a list of hidden bookmarks.

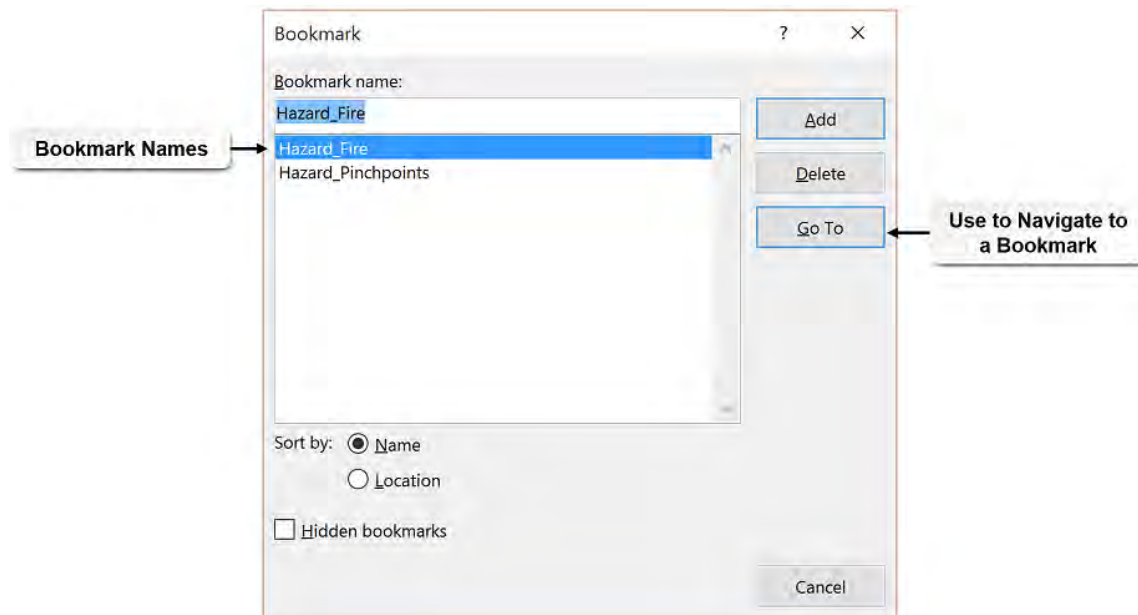


Figure 4–5: The Bookmark dialog box.

Bookmark Formatting Marks

When you insert a bookmark, the location is marked with a bookmark formatting mark that is not displayed by default. You can display this mark by using the **Advanced Word Options** and checking **Show bookmarks**. The bookmark formatting mark differs depending on what the

bookmark refers to. The mark appears as an I-beam when the bookmark refers to a location in the document. The mark appears as square brackets when the bookmark refers to a selection in the document.

Hidden Bookmarks

Word creates hidden bookmarks when you use specific Word features such as cross-references. Hidden bookmarks mark fields in the document. They can also be created using Visual Basic for Applications (VBA), Visual Basic® (VB), or other automation programming languages. These bookmarks are not indicated with bookmark formatting marks.



Access the Checklist tile on your **CHOICE** Course screen for reference information and job aids on **How to Work with Bookmarks**.

ACTIVITY 4-4

Creating and Using Bookmarks

Before You Begin

My Risk Assessment.docx is open.

Scenario

Various parts of the document need to be fleshed out some more. You will insert bookmarks to make it easier to find them later.

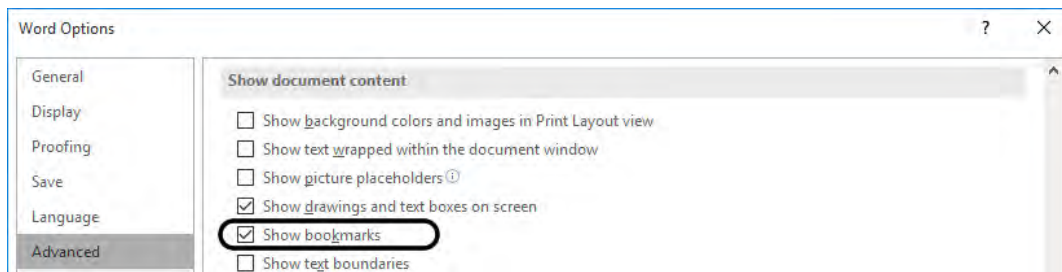
1. Add bookmarks to the document.

- On page 3, find the table row for **Fire**, and select the text **Fire** in the left column.
- On the **Insert** tab, in the **Links** group, select **Bookmark**.
- In the **Bookmark** dialog box, in the **Bookmark name** text box, type *Hazard_Fire*
- Select **Add**.

If **Show bookmarks** is not checked in **Word Options**, there is no indication that a bookmark has been linked to the text; if it is checked, then square brackets appear around the bookmarked text.

2. Display the bookmark formatting marks.

- On the **File** tab, select **Options**.
- In the **Word Options** dialog box, select the **Advanced** tab.
- In the **Show document content** panel, make sure **Show bookmarks** is checked.



- Select **OK**.

3. On page 4, bookmark the text **Pinch points** as *Hazard_Pinchpoints*

[Pinch point]

4. Navigate the document using a bookmark.

- Press **F5** to open the **Go To** tab of the **Find and Replace** dialog box.
- Below **Go to what**, select **Bookmark**.
- From the **Enter bookmark name** drop-down list, verify that the **Hazard_Fire** bookmark is selected, and select **Go To**.

The **Fire** hazard row is selected in the document.

- Select **Close** to close the **Find and Replace** dialog box.

5. Delete a bookmark from the document.
 - a) In the **Bookmark** dialog box, in the **Bookmark name** list box, make sure **Hazard_Fire** is selected, and select **Delete**.
 - b) Select **Close**.

Because there is no longer a bookmark for **Fire**, the brackets are no longer shown.
 - c) Save the document.
-

TOPIC D

Add Hyperlinks

Bookmarks and cross-references can be used to navigate through a long document. You may need the reader to navigate to related content both within and outside of the document. You can do this by including hyperlinks in your document.

Hyperlinks

A *hyperlink* is a navigational tool that links the content in a document to related information. The link is always represented by words or an image. You can insert hyperlinks into documents, web pages, text, figures, or tables.

Insert Hyperlink Dialog Box

The **Insert Hyperlink** dialog box provides options to insert hyperlinks to a new or existing document, the current document, a web page, or an email address. It also enables you to add a ScreenTip pop-up text box to help the reader understand the function of the hyperlink.

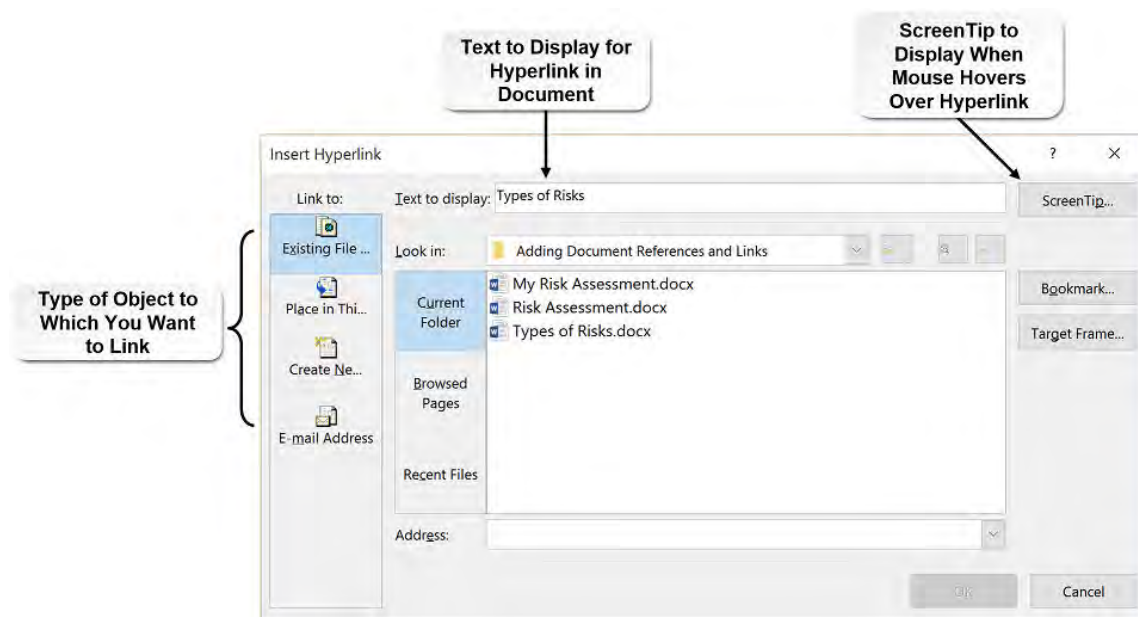


Figure 4-6: The *Insert Hyperlink dialog box*.

The following table describes the sections of the **Insert Hyperlink** dialog box.

Section	Description
Link to	Contains options that create a link to an existing file or web page, a place in the current document, a new document, or an email address.
Text to display	Enables you to enter the text that contains the hyperlink.
Look in	Contains options that help you navigate to and link a document or web page to the current document. The name and the options in this section change based on the option selected in the Link to panel.



Note: The **ScreenTip** button enables you to enter text that displays when the reader moves the mouse pointer over the hyperlink.

Options in the Link to Panel

In the **Insert Hyperlink** dialog box, the panel below the **Text to display** text box changes based on the option selected in the **Link to** panel.

<i>Option in the Link to Panel</i>	<i>Description</i>
Existing File or Web Page	Displays the Look in panel, which displays buttons to list locations in the current folder, browsed pages, or recent files. Be aware that if you link to a file and then share your document with another user, the file to which you linked must be accessible by the other user. The best practice is to link to a file that is stored in a shared folder.
Place in This Document	Displays the Select a place in this document panel, which enables you to link to a particular location in a document, such as a heading or bookmark.
Create New Document	Displays the Name of new document panel. The options in this section enable you to link to a new document.
E-mail Address	Displays the E-mail address panel. The options in this section enable you to link to an email address. Selecting this hyperlink opens a new email message in your email client software.

Edit Hyperlink Dialog Box

The **Edit Hyperlink** dialog box contains options that enable you to modify or adjust a hyperlink. The options in the **Edit Hyperlink** dialog box are similar to the options in the **Insert Hyperlink** dialog box. However, this dialog box also provides the option for deleting a link.



Access the Checklist tile on your **CHOICE** Course screen for reference information and job aids on **How to Work with Hyperlinks**.

ACTIVITY 4–5

Inserting Hyperlinks

Data File

Desktop\Projects\Adding Document References and Links\Types of Risks.docx

Before You Begin

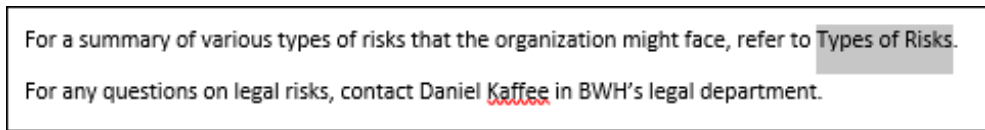
My Risk Assessment.docx is open.

Scenario

You will refer to information that is contained in another document. To help the reader navigate to the other document, you will provide a hyperlink. You will also provide a link to an email address, to make it easier for readers to compose an email.

1. Link to another Word document.

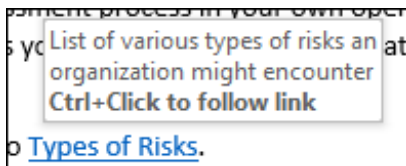
- a) In the second from last paragraph on page 1, select the text **Types of Risks**.



- b) On the **Insert** tab, select **Links→Hyperlink**.
The **Insert Hyperlink** dialog box is shown.
- c) In the **Look in** drop-down list, verify that the folder **Adding Document References and Links** is selected.
- d) In the list box, select **Types of Risks.docx**.
- e) Select the **ScreenTip** button.
- f) In the **ScreenTip text** text box, type *List of various types of risks an organization might encounter*
- g) Select **OK**.
- h) Select **OK** to close the **Insert Hyperlink** dialog box.
- i) Save the document.

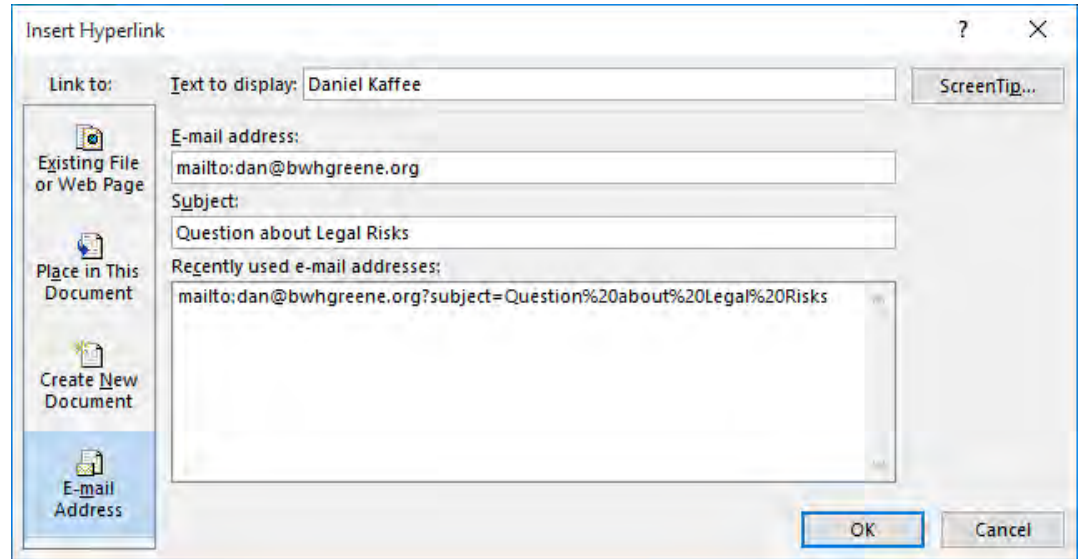
2. Test the hyperlink and view the linked document.

- a) Point to the hyperlink text to display the ScreenTip.

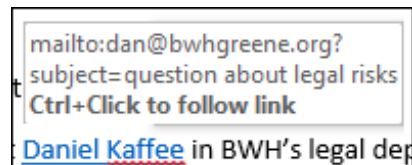


- b) Press **Ctrl** and click the **Types of Risks** link.
The file **Types of Risks.docx** opens in another window.
- c) After viewing the document, close the **Types of Risks.docx - Word** window and return to the My Risk Assessment.docx document.

3. Create an email hyperlink.
 - a) In the last paragraph on page 1, select the text **Daniel Kaffee**.
 - b) On the **Insert** tab, in the **Links** group, select **Hyperlink**.
 - c) In the **Link to** list, select **E-mail Address**.
 - d) In the **E-mail address** text box, type *dan@bwhgreene.org*
 - e) In the **Subject** text box, type *Question about Legal Risks*



- f) Select **OK**.
4. Observe the mailto hyperlink.
 - a) Point to the hyperlink text to display the ScreenTip.



- b) Notice that the link that was created is a mailto link to the address you entered with the default subject line after the question mark.
 - c) Save the document.
-

TOPIC E

Insert Footnotes and Endnotes

You have inserted bookmarks and cross-references that provide quick access to specific content. When you need to reuse or reference ideas from other authors, you insert footnotes and endnotes. These references cite or refer to the author of any borrowed content, as well as provide additional information for the reader.

Footnotes and Endnotes

A *footnote* is a citation or note inserted at the bottom of a page. It is associated with a particular term or specific information and provides additional details about that term or the source of that information. Footnotes appear on the same page as the text that is marked. *Endnotes* are similar to footnotes except they are inserted at the end of a section or the document. Each footnote or endnote is indicated by a note reference mark that appears after the relevant term.

The Footnote and Endnote Dialog Box

The **Footnote and Endnote** dialog box contains three panels that provide options to add, format, and modify a footnote or endnote.

<i>Option</i>	<i>Description</i>
Footnotes or Endnotes	Enables you to insert a footnote or an endnote in a document. Selecting one of the options opens the corresponding drop-down list where you can select the location of the note text.
Convert	Displays the Convert Notes dialog box. This dialog box enables you to convert all footnotes to endnotes, to convert all endnotes to footnotes, or to swap the footnotes and endnotes in the document.
Columns	Enables you to add a footnote or endnote in a layout that matches the document or in a columnar layout.
Number format	Provides options that enable you to format the numbers or symbols that represent the footnote or endnote. The available formats include asterisks, Roman numerals, and alphabets.
Custom mark	Enables you to insert a custom numbering format for the selected note type. Inserting a custom mark disables other formatting options.
Symbol	Displays the Symbol dialog box. You can choose any symbol to use as a custom mark. Selecting a symbol inserts it into the Custom mark text box and disables other formatting options.
Start at	Provides options to format the number or symbol that represents the first footnote or endnote in a document.
Numbering	Enables you to specify whether the numbering of the reference notes should be continuous, restart at the end of every section, or restart at the end of every page.
Apply changes to	Enables you to apply the specified format to a specific section or to the whole document.

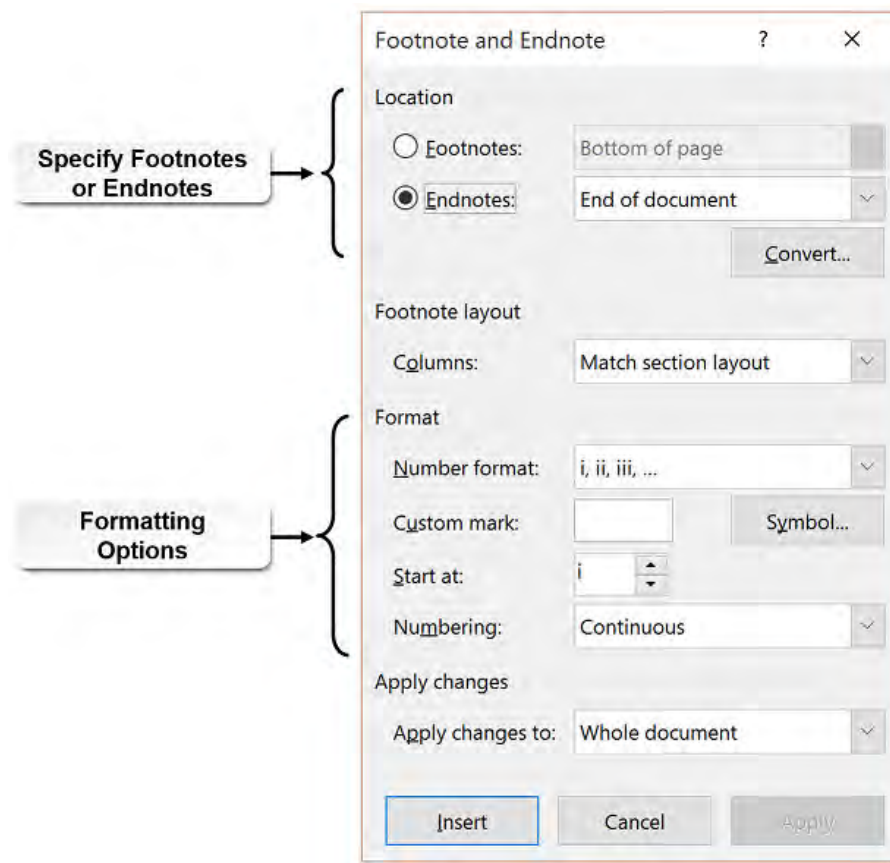


Figure 4–7: The Footnote and Endnote dialog box.

Placement


You can modify where the footnotes and endnotes are placed using the **Footnote and Endnote** dialog box. A footnote can be placed either at the bottom of the page or below the text. Endnotes can be placed at the end of a document or section. Once you select the location for the first note, any subsequent notes of that kind are displayed in the same location.

Reference Mark Navigation

You can also use reference marks to navigate between the main body of text and the note area. Double-click the reference mark in the document text to move the cursor from the reference mark to the specific note text either at the end of the page or the document. Double-click a reference mark in the footnote or endnote area to move the cursor to the reference mark within the text.

ScreenTips

When you read a document with footnotes or endnotes on the computer, you can see the note text without scrolling to the end of the page or the document. To see the pop-up note text, place the mouse pointer over the footnote or endnote reference mark.

	<p>Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Work with Footnotes and Endnotes.</p>
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ACTIVITY 4-6

Inserting Footnotes and Endnotes

Before You Begin

My Risk Assessment.docx is open.

Scenario

You will add a footnote to identify a source for additional documentation, and you will add an endnote to provide background information on a process described in the document.

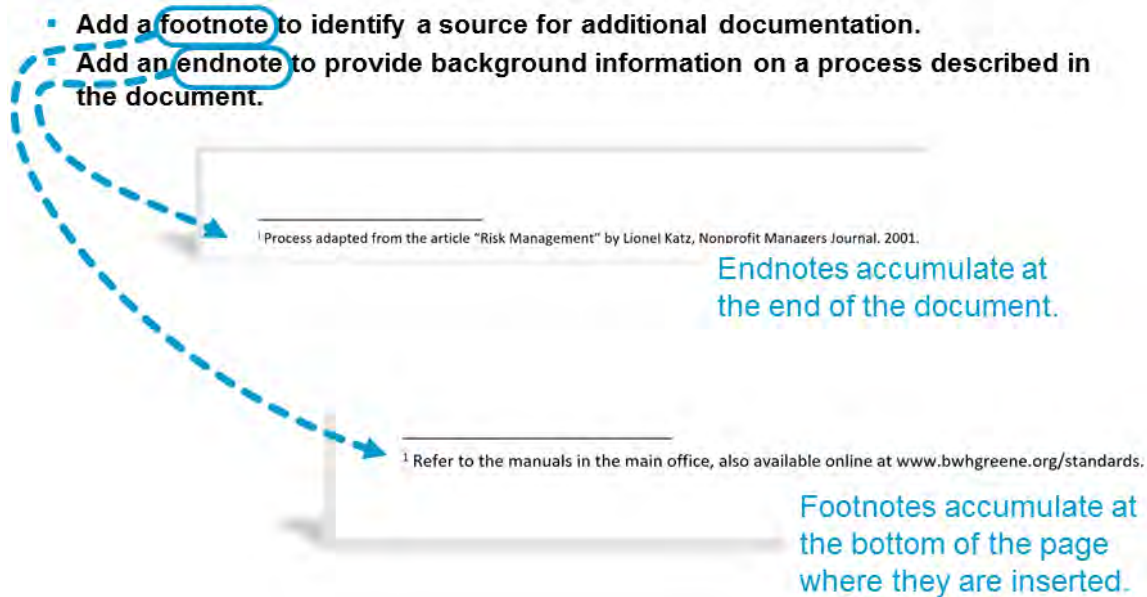


Figure 4-8: Inserting footnotes and endnotes.

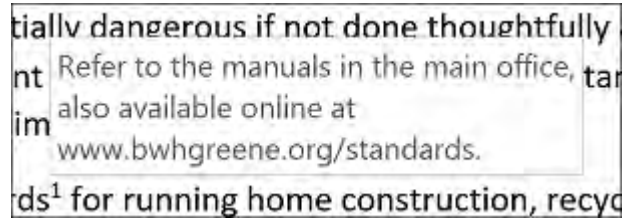
1. Insert a footnote in the document.
 - a) Scroll, if necessary, so you can see the **Introduction** section on page 1.
 - b) In the second paragraph in the **Introduction** section, place the insertion point immediately following the word **standards**.
 - c) On the **References** tab, in the **Footnotes** group, select **Insert Footnote**.
 - d) In the footnote area in the document, type *Refer to the manuals in the main office, also available online at www.bwhgreene.org/standards*.

1 Refer to the manuals in the main office, also available online at www.bwhgreene.org/standards.

The footnote is shown at the bottom of the page.

- e) If necessary, scroll to view the top of page 1 where you inserted the footnote.

- f) Point at the footnote number to display the footnote contents.



2. Insert an endnote in the document

- a) Scroll to the list on page 2, and locate the introductory sentence before the list that begins with **Perform these steps**.
 - b) Position the insertion point immediately after the word **steps**.
 - c) On the **References** tab, in the **Footnotes** group, select **Insert Endnote**.
An endnote is inserted at the end of the document, and the insertion point is moved to the endnote.
 - d) Type *Process adapted from the article "Risk Management" by Lionel Katz, Nonprofit Managers Journal, 2001.*
 - e) Save the document.
-

TOPIC F

Add Citations and a Bibliography

You know how to provide cross-references for content that is in another part of the document. In your document, you might need to refer to information or a quotation from another source to lend authority to your work. The credibility of your document is dependent on the references that you provide. In this topic, you will add citations and a bibliography.

Sources

A *source* is any reference material that contains information you use in your documents. For instance, reference materials might include text, a website, graphics, pictures, or tables. Once you create a source, it is added to a **Master List** of sources. Instead of re-creating source citations, you can copy a source from one document to another.

The Create Source Dialog Box

The **Create Source** dialog box contains options that enable you to create a new source for citations and bibliographies.

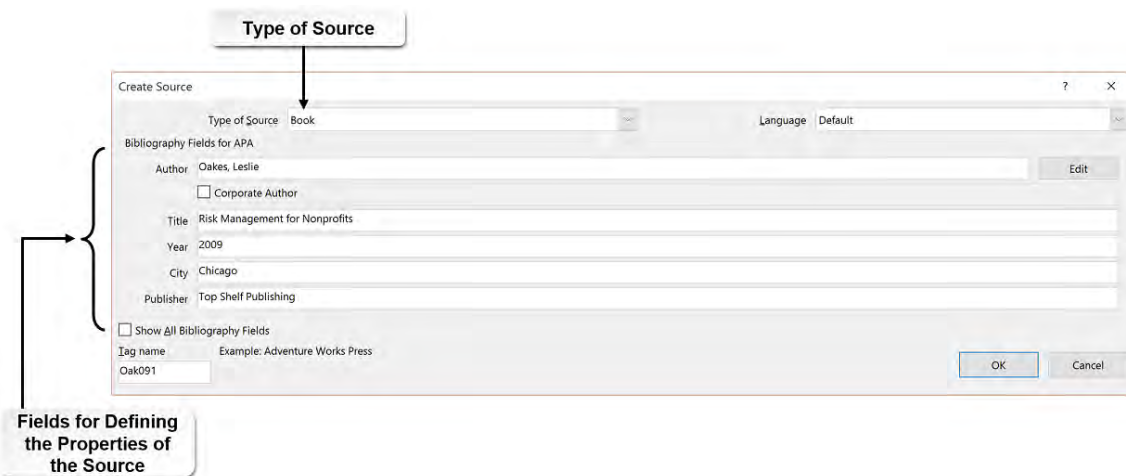


Figure 4–9: The *Create Source* dialog box.

The options available when creating a source vary depending on the reference style selected.

<i>Option</i>	<i>Description</i>
Type of Source	Displays a list of source types from which the content has been borrowed.
Bibliography Fields	Enables users to enter information about the source.
Show All Bibliography Fields	Displays all fields related to the reference style and source selected.
Tag name	Identifies a particular source and can be used to sort or search for a source. Tag names cannot contain spaces.

The Edit Source Dialog Box

You use the **Edit Source** dialog box to modify a source or a citation placeholder. The options in the **Edit Source** dialog box are similar to the options in the **Create Source** dialog box.

The Source Manager Dialog Box

The **Source Manager** dialog box contains options to help you find and insert sources. In this dialog box, you can search for, sort, copy, edit, delete, or create a new source. The **Search** box enables you to search for a specific source type by sorting on the author, tag, title, or year information.

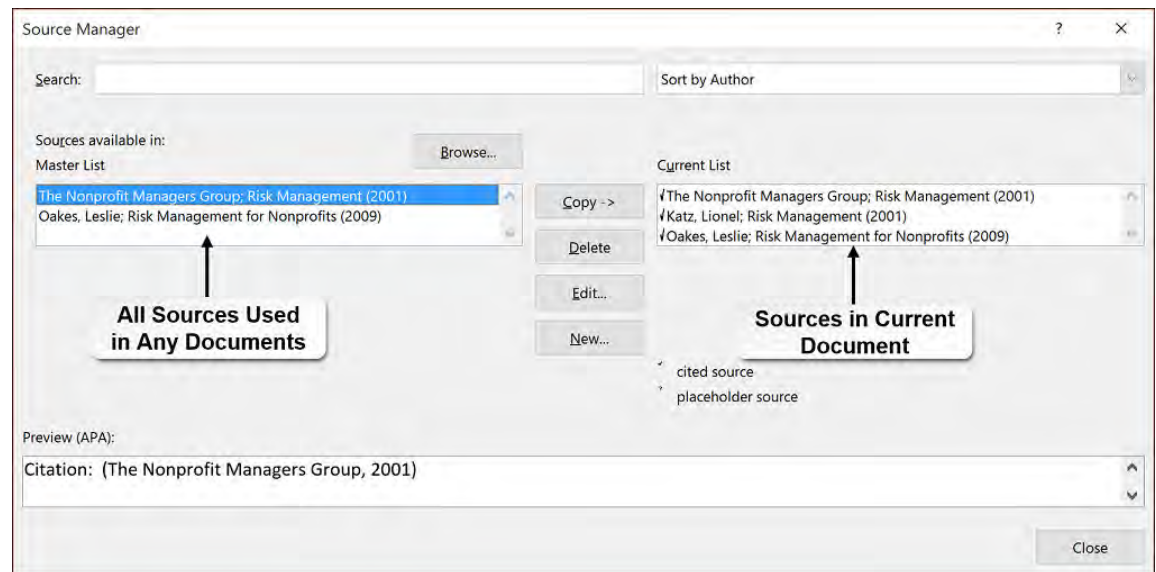


Figure 4–10: The Source Manager dialog box.

The **Sources available in** panel displays a list of sources available in the master and current documents. The **Master List** contains all sources you have used previously in any document. The **Current List** contains sources cited in the current document. By using the **Source Manager** dialog box, you can copy a source from the **Master List** to the **Current List**. The **Preview** section displays the style in which the source will be displayed, both as a citation and a bibliography entry.

Citations

A *citation* is a reference to a particular selection from an outside source. Citations can be made in the body of text or in footnotes found at the bottom of the page. If you don't have all the necessary information for a citation, you can mark it with a placeholder and fill in the details later. You use the **Insert Citation** option to create a citation. For legal citations, such as statutes and legal cases, use the **Mark Citation** option.

Citation Styles

A *citation style* provides the proper format for citing sources and other information in text and reference lists. The content or general discipline of the document often determines the style used. For example, the APA style is often used for scientific papers and documents. The MLA style is seen in documents having to do with the humanities, such as literature and foreign languages.

The following table describes the available citation styles.

Citation Style	Description
APA Fifth Edition APA Sixth Edition	The APA, or American Psychological Association, style is usually used as a reference style in psychology, education, and other social sciences–based documents. The Sixth Edition was published in 2009 and differs slightly from the Fifth Edition published in 2001.
Chicago Fifteenth Edition	The Chicago Fifteenth Edition style is used in non-academic documents such as magazines and newspapers.
GB7714 2005	GB7714 2005 is a style type issued by the Standardization Administration of China (SAC).
GOST – Name Sort GOST – Title Sort	GOST - Name Sort and GOST – Title Sort are styles followed by The Federal Agency of the Russian Federation on Technical Regulating and Metrology.
Harvard-Anglia 2008	Harvard-Anglia 2008 is a version of the Harvard System that is defined as a parenthetical reference style (author, date).
IEEE 2006	IEEE 2006 is a citation style followed by the Institute of Electrical and Electronics Engineers, and is commonly used in computing and electronics publications.
ISO 690 – First Element and Date ISO 690 – Numerical Reference	ISO 690 – First Element and Date and ISO 690 – Numerical Reference are styles followed by the International Organization for Standardization.
MLA Seventh Edition MLA Sixth Edition	MLA Seventh Edition and MLA Sixth Edition, or Modern Language Association, styles are used in documents related to literature, arts, and the humanities. The Seventh Edition was published in 2009 and differs slightly from the Sixth Edition published in 2003.
SISTO2	SISTO2 is also called the Standards for Information of Science and Technology style. This style is commonly used in Asian countries.
Turabian Sixth Edition	Turabian Sixth Edition style is commonly used by students in academic documents.

The Edit Citation Dialog Box

You use the **Edit Citation** dialog box to modify the display of a citation in the document text. This dialog box provides options to include page numbers in the citation. You can also suppress the author, year, and title information from being displayed in the document.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Work with Citations and Sources.

Bibliography

A *bibliography* is a list of references generally inserted at the end of a section or document. Bibliographic content identifies the edition, date of issue, authorship, and typography of books or

other written material. Bibliographies can also contain citations from web sources and other reference materials.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Work with a Bibliography.

ACTIVITY 4-7

Inserting Citations and a Placeholder

Before You Begin

My Risk Assessment.docx is open.

Scenario

The document includes a figure and a quote, both from outside sources. To give credit to those sources, you will add citations to the document. Since you don't have all the information for one citation, you will insert a placeholder to remind you to fill in the information later.

- You need to cite a figure and a quote from outside sources.
- You will insert a placeholder for the table citation and fill it in later.

Figure citation



Table citation

Hazard	Harm Caused	Current Controls
Electrical shocks or burns	Staff could experience electrical shocks or burns from faulty or improperly	<ul style="list-style-type: none"> • Staff are trained on proper use of electrical devices • Staff are trained to identify and report to manager faulty plugs, outlets, cable, and switches

Placeholder citation

Figure 4-11: Inserting citations and a placeholder.

1. Insert a citation.
 - a) On page 2, position the insertion point at the end of the figure caption.
 - b) On the **References** tab, in the **Citations & Bibliography** group, select **Insert Citation**, and from the drop-down list, select **Add New Source**.
The **Create Source** dialog box is shown.
 - c) From the **Type of Source** drop-down list, select **Report**.
 - d) Check the **Corporate Author** check box.

- e) Complete the fields in the **Create Source** dialog box using the following image as a guide.

- f) Select **OK**.
g) Verify that the citation was added after the figure caption.

Figure 1: The Risk Assessment Cycle (The Nonprofit Managers Group, 2001)

2. Add a quote citation.

- a) On page 1, position the insertion point after the text passage in quotation marks, which is in the second paragraph after the Introduction heading.

Introduction

Many of the tasks performed by Building with Heart personnel are potentially dangerous if not done thoughtfully and according to safe practices. As part of the Building with Heart management team, it is essential that you understand potential risks so that you can constantly be vigilant and identify ways to improve safety.

While Building with Heart provides extensive documentation and standards¹ for running home construction, recycling, and HouSalvage store operations, Leslie Oakes, author of *Risk Management for Nonprofits* states that you should “periodically perform the risk assessment process in your own operation to identify any special risks your operation may be exposed to, as well as any steps you can take to avoid or mitigate those risks.”

- b) Select **Insert Citation** and select **Add New Source**.
c) From the **Type of Source** drop-down list, select **Book**.

- d) Complete the remaining fields in the dialog box using the following image as a guide.

- e) Select **OK**.

While Building with Heart provides extensive documentation and standards⁴ for running home construction, recycling, and HouSalvage store operations, Leslie Oakes, author of *Risk Management for Nonprofits* states that you should “periodically perform the risk assessment process in your own operation to identify any special risks your operation may be exposed to, as well as any steps you can take to avoid or mitigate those risks.” (Oakes, 2009)

The citation is inserted after the quoted passage.

3. Add a citation placeholder.

- a) Scroll to the top of page 3.
- b) Place the insertion point at the end of the table caption.
- c) Select **Insert Citation** and select **Add New Placeholder**.
- d) In the **Placeholder Name** dialog box, type *TableSourceNeeded*



Note: Placeholder tags cannot contain spaces. The **OK** button is active only when you have a valid placeholder tag name in the text box.

- e) Select **OK**.

Table 1 Risk Management Table (TableSourceNeeded)

Hazard	Harm Caused	Current Controls
Electrical shocks or burns	Staff could experience electrical shocks or burns from faulty or improperly used electrical devices	<ul style="list-style-type: none"> • Staff are trained on proper use of electrical devices • Staff are trained to identify and report to manager faulty plugs, outlets, cable, and switches • Staff know where the fuse box is located and are trained to

The placeholder name appears as a citation.

- f) Save the document.

ACTIVITY 4–8

Adding a Bibliography

Before You Begin

My Risk Assessment.docx is open.

Scenario

You decide to add a bibliography of all cited sources so the reader can see all of the reference materials listed at the end of the document.

1. Add a bibliography.
 - a) Scroll to the end of the document. Place the insertion point in the second blank paragraph after the table.

members of the public		constantly active and monitored by the back room staff	

† Process adapted from the article "Risk Management" by Lionel Katz, Nonprofit Managers Journal, 2001.			

- b) In the **Citations & Bibliography** group, select **Bibliography**.
- c) From the drop-down list, in the **Built In** panel, select **Bibliography**.

A bibliography section is added to the document. All citations that you have added to the document (two of them, in this document) are shown in the list.
- d) Scroll, if necessary, so you can see the entire bibliography.

Bibliography Oakes, L. (2009). <i>Risk Management for Nonprofits</i> . Chicago: Top Shelf Publishing. The Nonprofit Managers Group. (2001). <i>Risk Management</i> . Greene City: NPMG Press.
--

2. Save the document.
-

ACTIVITY 4–9

Modifying a Citation and Bibliography

Before You Begin

My Risk Assessment.docx is open.

Scenario

Your bibliography is not complete without the citation you marked with a placeholder. You now have the information to fill in the placeholder citation. You will modify the incomplete citation and then update the bibliography. You also notice that in the text the citation for Leslie Oakes is redundant. You modify how the citation is displayed in the document.

- **Fill in the incomplete citation where you left a placeholder, and refresh the bibliography so it contains the updated citation.**
- **Modify how the “Oakes” citation is displayed. The name is redundant since it is mentioned in the sentence, so remove it from the citation.**

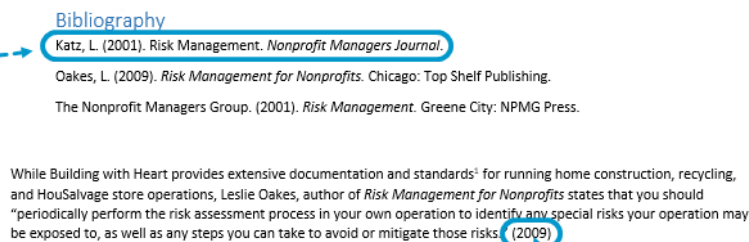


Figure 4–12: Modifying a citation and bibliography.

1. Update the citation placeholder.
 - a) On the **References** tab, in the **Citations & Bibliography** group, select **Manage Sources**.
 - b) In the **Current List** list box, select **?TableSourceNeeded**.
 - c) In the center of the dialog box, select **Edit**.
 - d) In the **Edit Source** dialog box, from the **Type of Source** drop-down list, select **Journal Article**.

- e) Fill in the dialog box text boxes by using the following graphic as a reference, and then select **OK**.

- f) Select **Close**.
2. Update the bibliography information.
- Scroll to the end of the document and click anywhere within the bibliography.
 - In the control panel above the bibliography, select the **Update Citations and Bibliography** button.



- Observe that the bibliography now contains the citation for Katz, L.
 - Save the document.
3. Suppress the display of the author name and title in a citation.
- Scroll to the top of page 1.
 - Select the citation for **(Oakes, 2009)**
You've already mentioned the author's name in the sentence, so you'll suppress it in the citation.
 - Select the **Citation Options** drop-down arrow on the citation and select **Edit Citation**.
 - In the **Edit Citation** dialog box, check the **Author** and **Title** check boxes.

Notice that you can use the check boxes in the **Suppress** section to control whether the citation shows the author, year, and/or title.

- Select **OK**. Note that now the citation displays only the year.
- Save and close the document.

Summary

In this lesson, you added helpful reference marks to a document. Captions, cross-references, bookmarks, and hyperlinks provide the reader with navigational tools to marked locations. Footnotes, endnotes, citations, and bibliographies supply the reader with in-depth data and source information.

In what types of documents will you use cross-references?

What factors help you decide whether to use footnotes or endnotes?



Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

5

Securing a Document

Lesson Time: 1 hour, 5 minutes

Lesson Objectives

In this lesson, you will:

- Suppress information.
- Set formatting and editing restrictions.
- Restrict document access.
- Add a digital signature to a document.

Lesson Introduction

After you finalize your document by adding reference tables and other features that give your document polish, you may want to distribute it to others. Before you do that, you need to know that any sensitive information has not been saved with the file, and to take measures to prevent unauthorized access or changes to the contents of the document.

TOPIC A

Suppress Information

You have seen that Word saves key information about each document with the file, such as the author and company name. While generally you want to share this metadata with other users, there are times when you might not want to share this information with others. Before you share or distribute documents, you need to consider how to restrict access to the content and remove confidential information from a document.

Suppress Sensitive Information

Dealing with sensitive information can be handled in a couple of ways. One way is to hide the text from being displayed. Alternatively, you can strip the sensitive information and document properties from the file itself.

Hidden Text

Hidden text is a character format that conceals the formatted text unless it is intentionally displayed. Hidden text is used to conceal confidential and sensitive text in a document when it is printed or displayed on the screen. Instead of creating different versions of the same document for different audiences, you can simply hide text that one audience shouldn't see. The material remains in the document to be displayed at an appropriate time. Hidden text also can prevent specific text from printing, such as the answers on a test or notes on a presentation handout. Although Word doesn't display hidden text, Word does search hidden text when you search a document.



Note: Hidden text will not print unless you modify the **Print Hidden Text** printing option.



Access the Checklist tile on your **CHOICE** Course screen for reference information and job aids on **How to Work with Hidden Text**.

ACTIVITY 5-1

Hiding Text

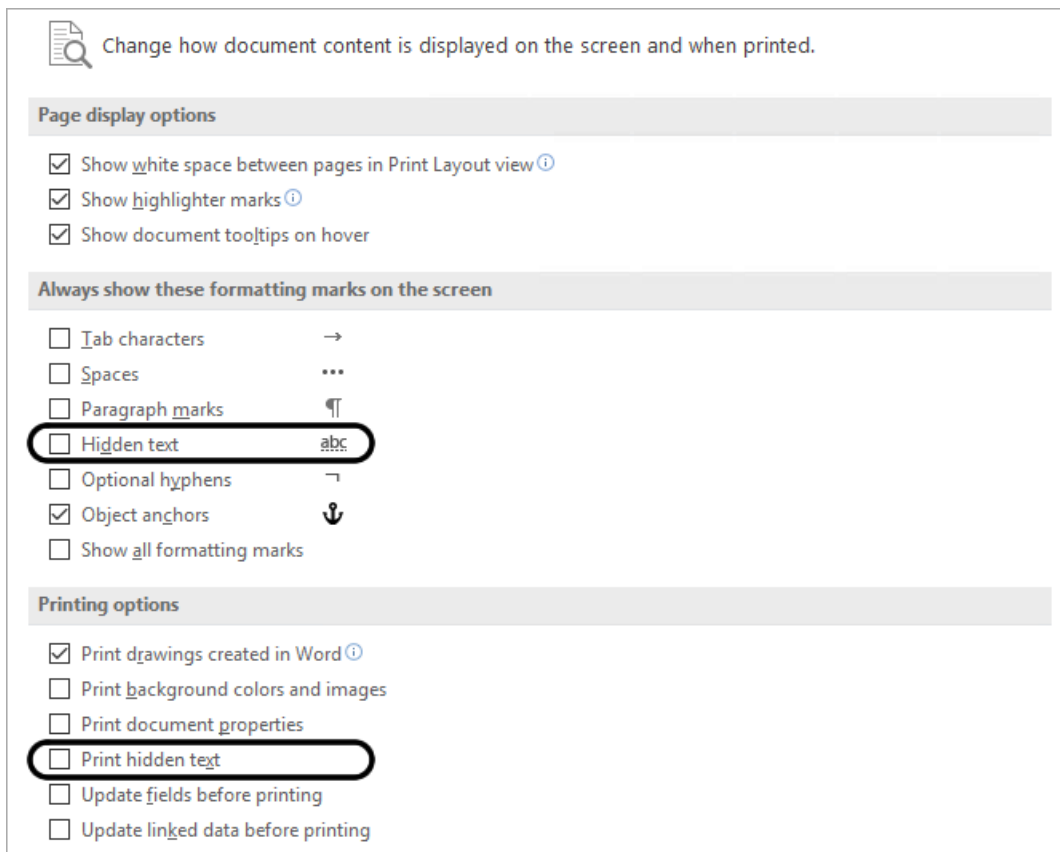
Data File

Desktop\Projects\Securing a Document\Screening Form.docx

Scenario

Some of the information in a candidate screening form is for internal use only, and you want to hide it when you print the document for distribution. You will format that information as hidden text.

1. Make sure Word is configured to hide text that is formatted as hidden.
 - a) From the **Desktop\Projects\Securing a Document** folder, open **Screening Form.docx**.
 - b) Make sure paragraph marks are *not* showing.
 - c) Select **File→Options**.
 - d) Select the **Display** tab.
 - e) Make sure the hidden text options are unchecked, as shown.



- f) Select **OK**.

2. Apply hidden text formatting.

- a) Select the **Coding Status** table.

Applicant	
First Name:	Henry
Last Name:	Williams
Case:	12W

Coding Status	
F206a:	Requirements met
HUD 123:	Requirements met
8383.2:	Requirements met

Disposition
Application has been [STATUS].

Signature	
Signature:	

- b) On the **Home** tab, in the **Font** group, select the **Font** Dialog Box Launcher. The **Font** dialog box is shown with the **Font** tab selected.
- c) In the **Effects** panel, check **Hidden** and select **OK**. The selected table disappears.
- d) Show paragraph marks.
When paragraph marks are shown, hidden text is also shown. The Coding Status table is visible again. It will not appear when printed.
3. Print Preview the document.
- a) Select **File→Print**.
- b) Notice that the hidden text is not displayed in the preview pane.
- c) Press **Esc** to return to the document.
4. Save the file in the current folder (**Desktop\Projects\Securing a Document**) as **My Screening Form.docx**

Remove Personal Information from a Document

As you work with a document, Word is recording a variety of details about the file along with the text. Some of these details you might not want others to have access to when you share the file, such as tracked changes or comments saved in the document properties. To avoid any potential problems with this sensitive information, personal and private information should be removed if you intend to distribute the document.

Today, you can't be too careful about the type of information that you share. Even if you don't see confidential information in a document, it might be still be part of the file, meaning someone could find it. Often, you don't even know potentially harmful data is in the file, or don't know where to look for it. Fortunately, Word can find that information and remove it for you.

The Document Inspector Dialog Box

The **Document Inspector** dialog box provides you with various options to identify specific content in a document.

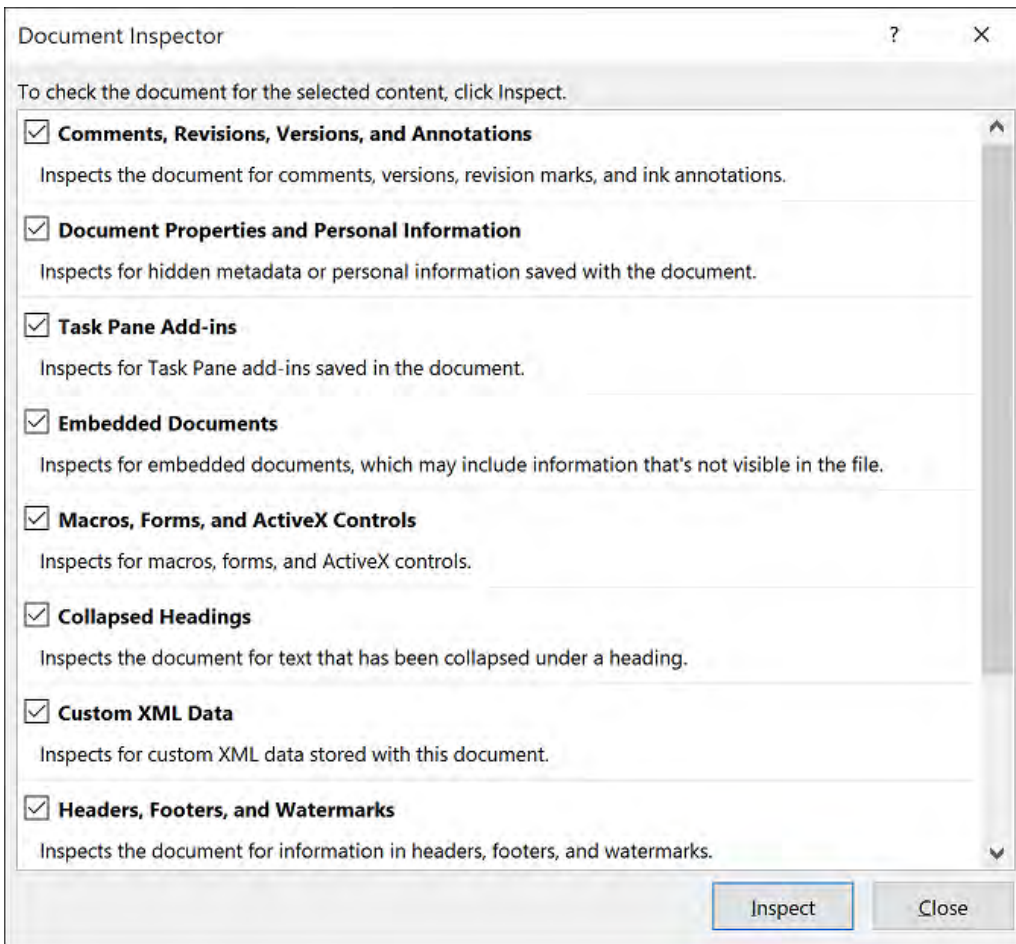


Figure 5-1: *The Document Inspector dialog box.*

The following table describes the options available in the **Document Inspector** dialog box.

Option	Description
Comments, Revisions, Versions, and Annotations	Inspects the document for comments, versions, revision marks, and ink annotations.
Document Properties and Personal Information	Inspects for hidden metadata and personal information saved in the document.
Task Pane Add-ins	Looks for custom add-in task panes in the document.
Embedded Documents	Inspects for embedded links to other documents.
Macros, Forms, and ActiveX Controls	Inspects the document for macros, forms, and ActiveX controls.
Collapsed Headings	Checks for collapsed headings with content beneath them.
Custom XML Data	Inspects for custom XML data stored with the document, such as co-authors, bibliographies, or macros.
Headers, Footers, and Watermarks	Inspects the document for information in the header, footer, and watermark.
Invisible Content	Inspects the document for objects formatted as invisible.
Hidden Text	Inspects the document for text formatted as hidden.



Caution: Some changes made by the **Document Inspector** cannot be undone. Save the file before using the **Document Inspector**.

Tracked Changes Security Issues

Sharing a document containing tracked changes may cause legal problems if the changes show that a reviewer deleted pertinent information. You might not remember that tracked changes are contained in a document. If you want to make sure you know about tracked changes before you print or send sensitive documents, you can set a Word option to warn you before you save, send, or print a document that contains tracked changes.



Access the Checklist tile on your **CHOICE** Course screen for reference information and job aids on **How to Deal with Private Information in a Document**.

ACTIVITY 5-2

Removing Personal Information

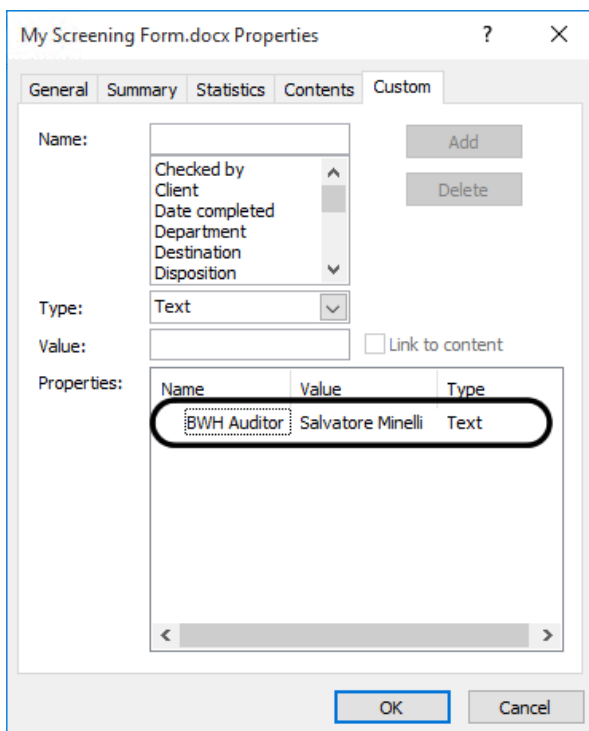
Before You Begin

My Screening Form.docx is open in Word.

Scenario

Before you distribute the screening form document, you will check the document for custom properties that contain sensitive information you do not want to include, and you will remove that information. You will also remove any comments and tracked changes that were added as part of the review process.

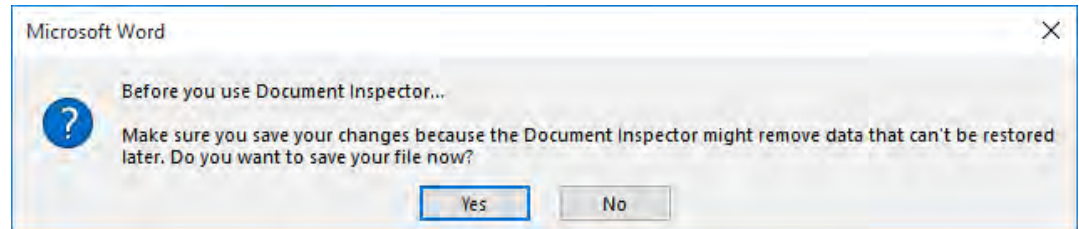
1. Remove a custom document property.
 - a) Note that there are comments from different reviewers that appear as tracked changes.
 - b) Select **File** to display the **Backstage** view.
 - c) With **Info** selected, select **Properties**→**Advanced Properties**.
 - d) In the **My Screening Form.docx Properties** dialog box, select the **Custom** tab.
 - e) In the **Properties** list box, examine the **BWH Auditor** custom property. The value for the property is Salvatore Minelli.



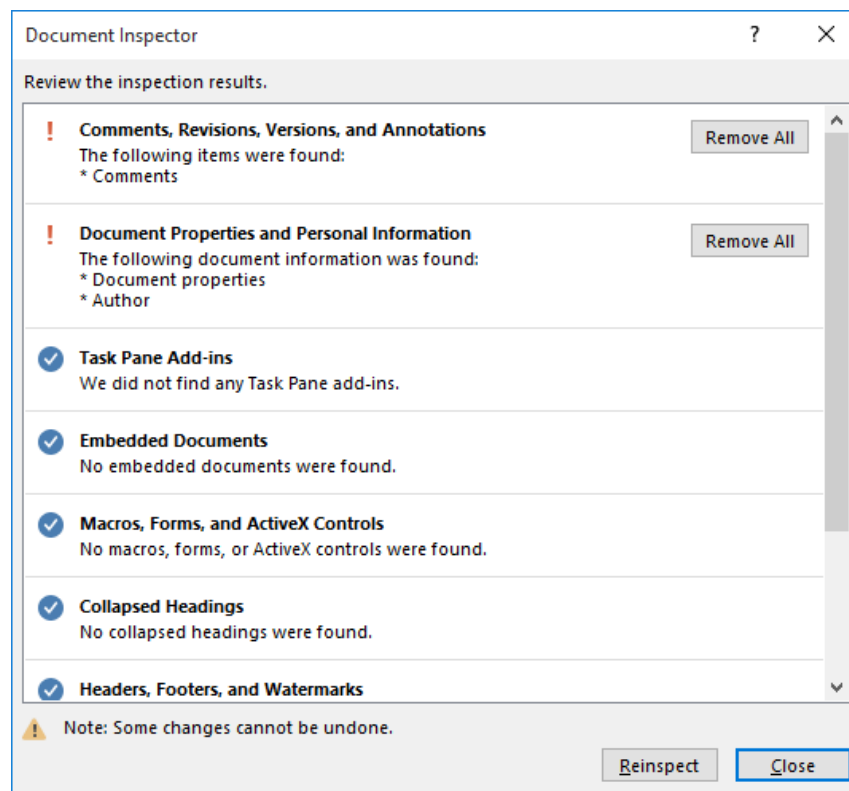
You may need to expand the column widths or scroll to see the complete **Value** text.

- f) In the **Properties** list, select **BWH Auditor**.
 - g) Select **Delete** and then select **OK**.
2. Remove all personal information using the **Document Inspector**.

- a) Select **Check for Issues**→**Inspect Document**.



- b) Select **Yes**.
 c) Observe the **Document Inspector** dialog box.
 You can uncheck any of the items the **Document Inspector** looks for to prevent it from looking for that information in your document.
 d) Select **Inspect**.



The **Document Inspector** finds comments and also document properties with personal information. It marks these items with a red exclamation point and displays the **Remove All** button to the right of the item.

- e) For both **Comments, Revisions, Versions, and Annotations** and **Document Properties and Personal Information**, select **Remove All**.
 f) Scroll down in the **Document Inspector** dialog box and observe that hidden text was also found. You'll leave that in the document.
 g) Select **Close**.
 h) Notice that the comments have been removed. Information about who made changes through Track Changes would also be removed, and the changes are no longer formatted with change tracking.
 i) Save the document.

TOPIC B

Set Formatting and Editing Restrictions

You know how to remove personal information from a document. Sometimes that measure alone is not enough to protect your documents. To preserve the authenticity of your document, you will need to prevent others from changing and formatting its contents. Word enables you to specify formatting and editing restrictions for a given document.

When you share a document with others, you may want them to focus on the content of the document and not the formatting. On the other hand, you might not want the people with whom you share the document to make changes to it. Before sending the document for review, you can limit the ability of specific users to format and edit the document. This way, you prevent them from trying to modify the contents or determining how something is formatted and keep them focused on the task at hand. It also ensures that you won't have to undo any formatting changes they might make.

The Developer Tab

In the **Word Options** dialog box, you can add the **Developer** tab to the ribbon. The tab includes groups you can use to work with macros, Visual Basic® code, Add-Ins, Content Controls, an XML schema, document-protection tools, and templates.

The Restrict Editing Task Pane

On the **Developer** tab, selecting **Restrict Editing** opens the **Restrict Editing** task pane. This pane is used to apply formatting and editing restrictions to a document.

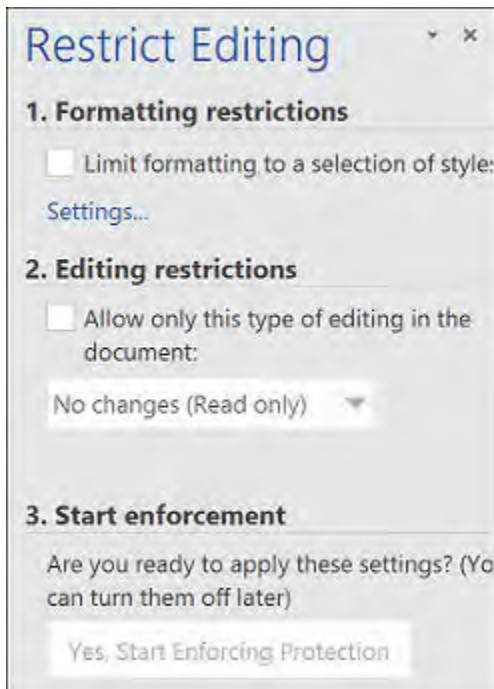


Figure 5-2: The Restrict Editing task pane.

The **Restrict Editing** task pane consists of three sections.

<i>Section</i>	<i>Description</i>
Formatting restrictions	Limits formatting to the set of styles specified in the Formatting Restrictions dialog box.
Editing restrictions	Restricts the type of editing that can be performed in a document.
Start enforcement	Enforces the restrictions specified in the Restrict Formatting and Editing task pane.

Editing Restrictions

There are four types of editing restrictions that can be enforced on a document.

<i>Type</i>	<i>Description</i>
Tracked changes	Forces change tracking to be enabled.
Comments	Allows only comments to be added to the protected document.
Filling in forms	Allows the only changes to be information entered in form fields.
No changes (Read only)	Prevents any changes to the document.

Protected View

Protected view is a read-only view, which is enabled by default whenever a Word document is downloaded from the Internet. To edit the document, in the message bar, you have to select **Enable Editing**. Since this feature does not allow editing, you may want to turn off the **Protected View** in the **Trust Center** dialog box. To disable it, on the **Protected View** tab, uncheck **Enable Protected View for files originating from the Internet**.

Mark as Final

When you have finished editing a file, you can make the file read-only so that it is not accidentally modified. This is accomplished with the **Mark as Final** command. The status of the file is set to **Final**. All typing, use of editing commands, and proofing marks are unavailable in the document. This shouldn't be considered as a security feature because the **Mark as Final** status can be removed from the file.



Note: If the file is opened in Word 2007 or earlier, the file is not read-only.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on **How to Set Formatting and Editing Restrictions**.

ACTIVITY 5–3

Setting Formatting and Editing Restrictions

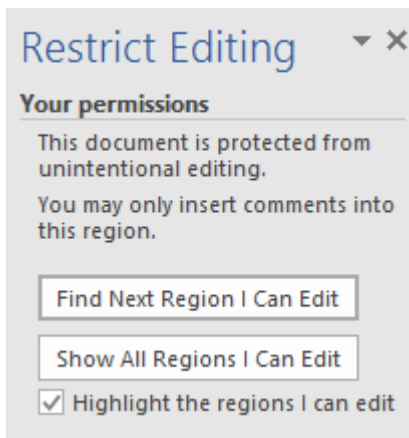
Data File

Desktop\Projects\Securing a Document\Securing Risk Assessment.docx

Scenario

You will apply password protection to a document to prevent formatting and editing changes.

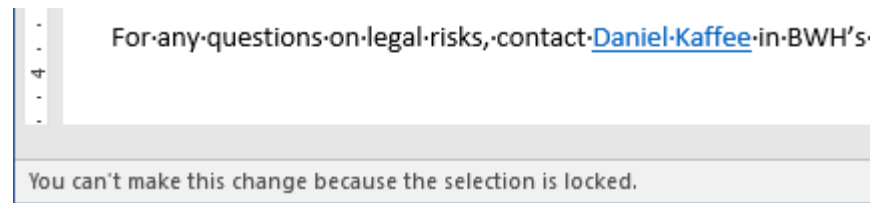
1. Display the **Developer** tab.
 - a) From the **Desktop\Projects\Securing a Document** folder, open **Securing Risk Assessment.docx**.
 - b) Select **File→Options** and select the **Customize Ribbon** tab.
 - c) In the list on the right side, check **Developer**, and select **OK** to add the **Developer** tab to the ribbon.
2. Apply editing restrictions to the document.
 - a) On the **Developer** tab, in the **Protect** group, select **Restrict Editing**.
 - b) In the **Restrict Editing** task pane, in the **Editing restrictions** section, check **Allow only this type of editing in the document**.
 - c) From the **Editing restrictions** drop-down list, select **Comments**.
3. Enforce the editing restrictions.
 - a) In the **Start enforcement** section, select **Yes, Start Enforcing Protection**.
 - b) In the **Start Enforcing Protection** dialog box, in the **Password** section, in the **Enter new password (optional)** text box, type *2protectFromRevs*
 - c) In the **Reenter password to confirm** text box, type *2protectFromRevs* and select **OK**.
 - d) In the **Restrict Editing** task pane, in the **Your permissions** section, notice the message indicating that the document is protected from unintentional editing.



- e) Close the **Restrict Editing** task pane.
 - f) Save the file in the current folder (**Desktop\Projects\Securing a Document**) as *My Securing Risk Assessment.docx*
4. Test the restrictions imposed on the document.

- a) Select any text in the document and press **Delete**.

The status bar displays the message **You can't make this change because the selection is locked.**



- b) Select the **Home** tab.
- c) In the text of the document, select any word and examine the ribbon.
Many editing tools are not available because of the editing restrictions applied to this document.
- d) On the **Review** tab, in the **Comments** group, select **New Comment**.
- e) Type a comment in the comment text box.
- f) Save the document.
-

TOPIC C

Restrict Document Access

You have seen how to prevent information from being modified in a document. As a further measure of security, you can prevent unauthorized users from even opening a document. In this topic, you will set a password for a document to restrict access to it.

There is always a chance that documents with sensitive information can be sent to unauthorized users. You can protect yourself and the document information from this mistake by password-protecting your document. Without knowing the password, a user can't access the information in the document.

Document Password

A password is a string of characters that must be correctly entered to access or modify a document. Passwords are case sensitive and can include letters, numbers, punctuation marks, spaces, and symbols. By mixing a variety of cases and characters, you can make the password difficult to guess. However, you need to ensure that your password is something you can readily recall, because if you forget it, you will have difficulty opening the document.

Change Document Password

You can change the password currently assigned to a document. You will need to enter the current password, then perform the steps to create a password, erase the dots that represent the current password, and enter the new password.

Delete Document Password

You can also remove the password from the document if you decide you no longer want it password protected. In the dialog box where you assign the password, just erase all of the dots that represent the current password and then select **OK**.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Work with a Document Password.

ACTIVITY 5-4

Setting a Password for a Document

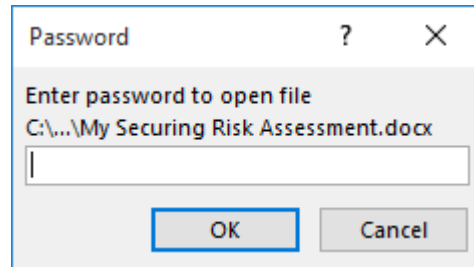
Before You Begin

My Securing Risk Assessment.docx is open in Word.

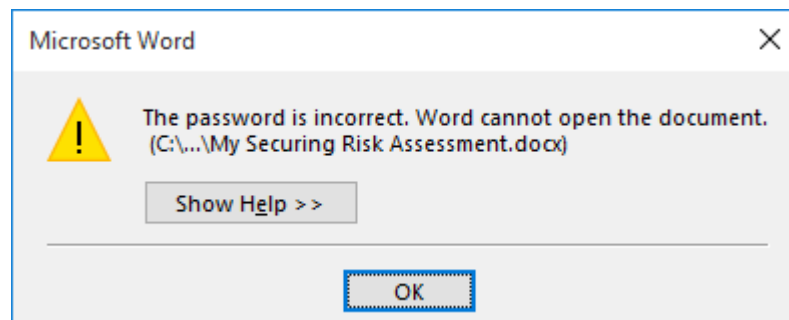
Scenario

You will apply password protection to a document to prevent unauthorized users from opening and viewing the document.

1. Password-protect the document.
 - a) Select the **File**→**Info** tab, and select **Protect Document**→**Encrypt with Password**.
 - b) In the **Encrypt Document** dialog box, in the **Password** text box, type *2blockOpening* and select **OK**.
 - c) In the **Confirm Password** dialog box, in the **Reenter password** text box, type *2blockOpening* and select **OK**.
 - d) Save the document and close it.
2. Verify that the document is password protected.
 - a) Reopen the file **My Securing Risk Assessment.docx**.



- b) In the **Password** dialog box, in the **Enter password to open file** text box, type *badguess* and select **OK**.



- c) Select **OK**.
 - d) Exit **Word**.
3. Open the document with the correct password.
 - a) Open the file **My Securing Risk Assessment.docx**.
You are prompted to enter the password again.

- b) Type **2blockOpening** and select **OK**.
 - c) Observe that **My Securing Risk Assessment.docx** opens in the **Reading View**. Word uses the **Reading View** because the document is protected from editing.
 - d) Close the document.
-

TOPIC D

Add a Digital Signature to a Document

You know how to prevent formatting and editing changes to a document. Another security concern is verifying the source of a document and checking whether it contains the original contents. In this topic, you will add a digital signature to a document.

If a document is electronically signed, then it is a valid document. Changes in a digital signature can be detected electronically, helping to ensure that the document is free from forgery and false information. Also, the author cannot deny creating and sending the document. Word locks documents that are digitally signed, and any attempt to tamper with the documents will make the signature invalid.

Digital Certificates

A *digital certificate* is an electronic file that contains unique information about a specific person. It contains a serial number, a digital signature from a certificate-issuing authority, expiration dates, a name, and a copy of the certificate holder's public key so that a recipient can verify that the certificate is authentic. It is issued by a *certification authority (CA)*, which is a trusted third party, or from your company's computer department. If you do not want to purchase digital certificates issued by a third party, you can create your own digital ID, but other people cannot verify the authenticity of the signature. A digital certificate is also known as a digital ID because it is used to digitally sign a document.

Digital Signature

A *digital signature* is a content authentication tool that authenticates the sender of a file and ensures the integrity of digital documents. When you attach a digital signature to a document, the document is considered to be signed. Once signed, the document cannot be modified without removing the digital signature. The signature can be either visible or invisible.

The Signature Line

A *signature line* is used to add a digital signature to a document. A signature line is usually found at the end of the document, though it can be used anywhere in the document. It records the content exactly as it was when signed, and allows the signature to be verified when needed. You can add either text or images to a signature line.



Note: You can create multiple signatures for a file.

The Signatures Task Pane

The **Signatures** task pane lists all signatures in a document. It groups signatures based on either of these two categories: valid signatures or requested signatures. Valid signatures include all the signature details and setup information. The requested signatures include only the signature setup information. To open the **Signatures** task pane, on the status bar of a signed document, select the **Signatures** button. Or when you open a document, in the information pane at the top of the document, select **View Signatures**.

Requested Signatures

Requested signatures are signatures that contain the setup information required for creating a signature. This could include information such as the signer's name, title, email address, and other instructions for the signer. The digital certificate will not be issued until the signature becomes a valid one, which can be done by signing the document.

If changes are made to a signed document, the document is saved without the signature. The **Signatures** task pane then shows that there are **Requested signatures** for the names listed in the task pane.

Valid Signatures

Valid signatures are signatures that contain signature details in addition to the signature setup information. In addition to the signer's name, title, email address, and other instructions, valid signatures also contain the text or image used to sign a document digitally. Valid signatures imply that there are no issues with the certificate.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Add a Digital Signature and Sign a Document.

ACTIVITY 5–5

Preparing a Document to Be Signed

Data File

Desktop\Projects\Securing a Document\colin_rivera_signature.png

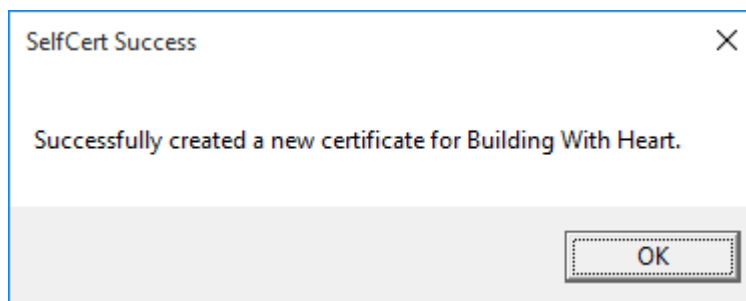
Before You Begin

My Screening Form.docx is open in Word. You have a shortcut to the Selfcert.exe program on your Desktop.

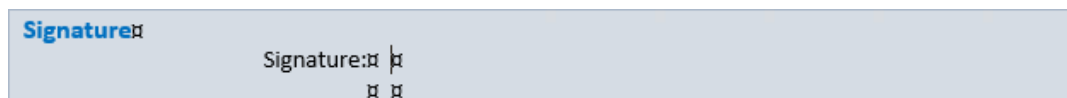
Scenario

Throughout the various approval processes for applications to the Building with Heart program, you must provide a documentation trail, and you must have a means to ensure that the content of documents has not been modified once those documents have been digitally signed. In this activity, you will prepare one of the organization's screening forms to be digitally signed. You will obtain a digital certificate that will be used in the signing process, and you will add a signature line to the document.

1. Create a digital certificate.
 - a) Minimize Word.
 - b) On your Desktop, double-click the **selfcert.exe** shortcut.
 - c) In the **Your Certificate's Name** text box, type **Building With Heart** and select **OK**.

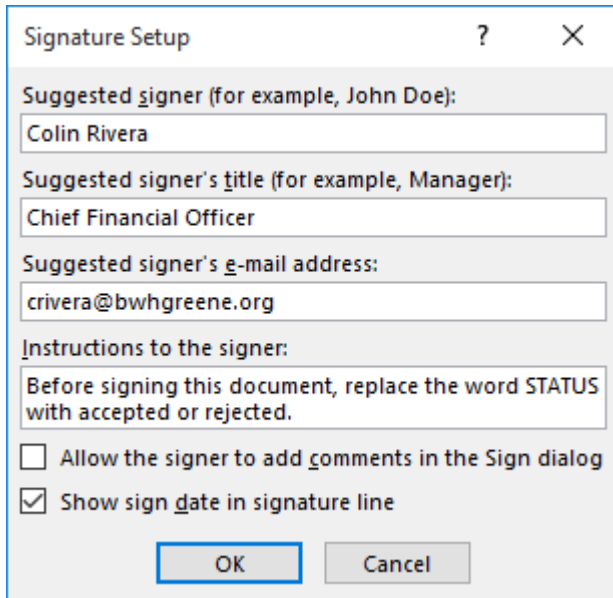


- d) Select **OK** to acknowledge that the digital certificate was created.
2. Add a signature line to a document.
 - a) In the **My Screening Form.docx - Word** window, in the **Signature** table, select the cell to the right of **Signature:**.



- b) On the **Insert** tab, in the **Text** group, select **Signature Line**→**Microsoft Office Signature Line**.

- c) Enter or modify text in each of the fields as shown.



Signature Setup

Suggested signer (for example, John Doe):
Colin Rivera

Suggested signer's title (for example, Manager):
Chief Financial Officer

Suggested signer's e-mail address:
crivera@bwhgreene.org

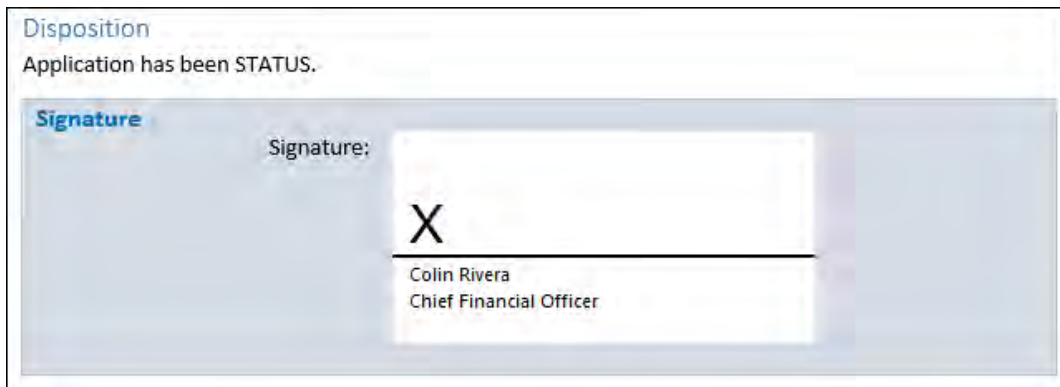
Instructions to the signer:
Before signing this document, replace the word STATUS with accepted or rejected.

Allow the signer to add comments in the Sign dialog

Show sign date in signature line

OK Cancel

- d) Select **OK** to add the digital ID placeholder for the digital signature in the document.



Disposition

Application has been STATUS.

Signature

Signature:

X

Colin Rivera
Chief Financial Officer

The document is now set up for a signature.

- e) Save the document.

ACTIVITY 5–6

Digitally Signing a Document

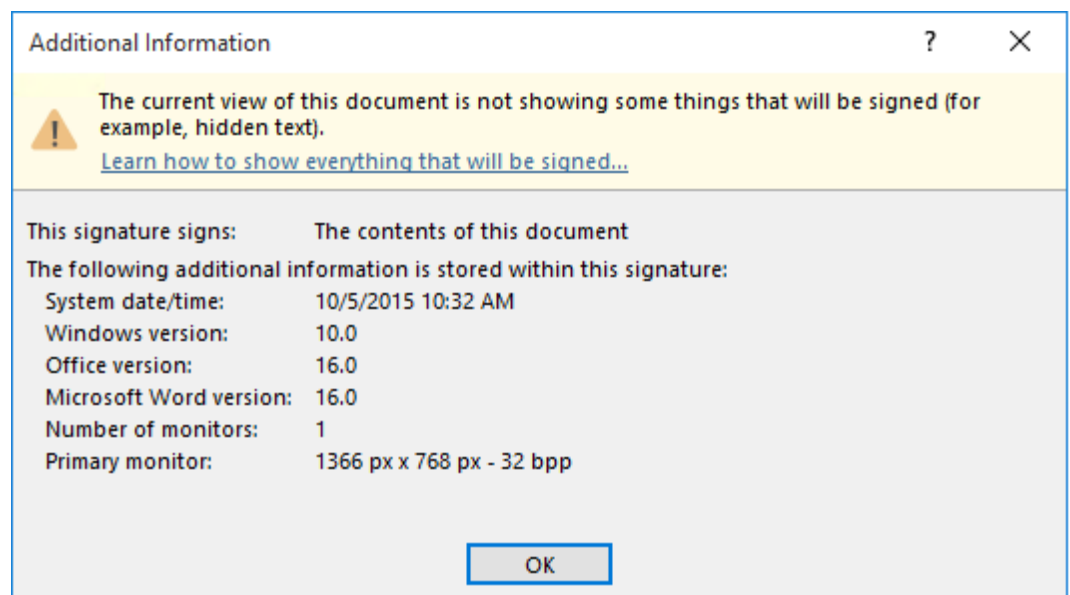
Before You Begin

You have created a digital certificate and have added a signature line to My Screening Form.docx.

Scenario

Now that you have a document with a signature line, you'll use a digital certificate to sign the document. To provide the visual appearance of being signed, you'll provide a graphic signature in addition to the certificate. After you've signed the document, you'll verify that it's protected from modification unless you remove the signature.

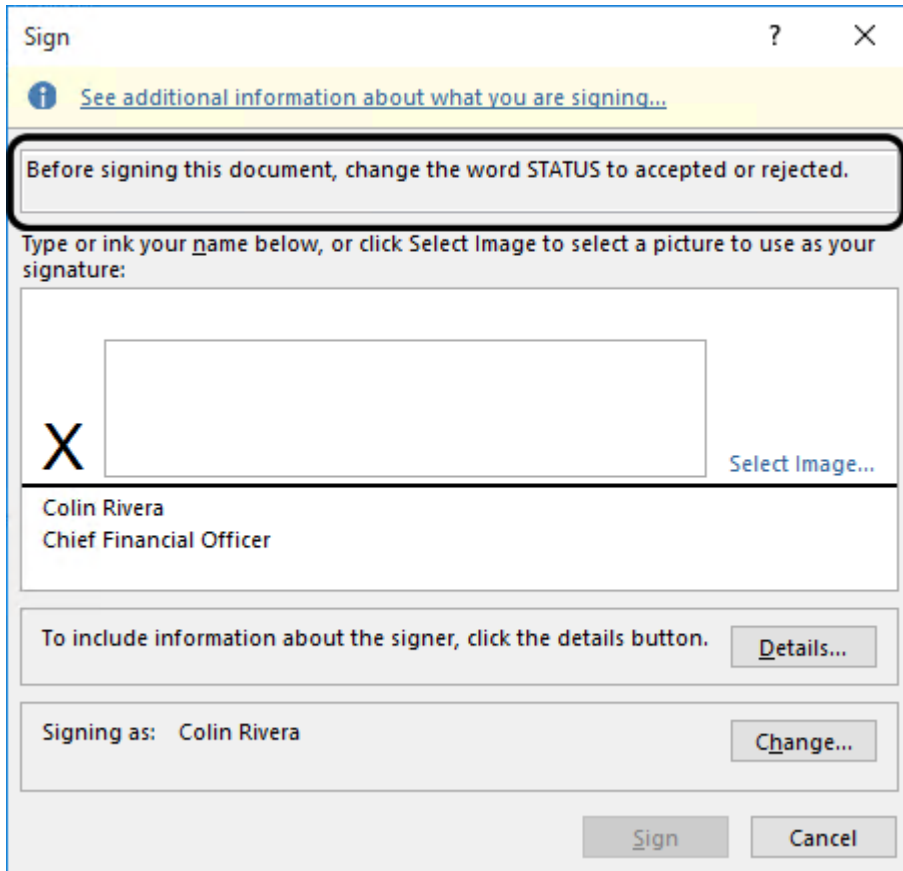
1. Examine a document before signing.
 - a) Right-click the digital ID placeholder and select **Sign**.
 - b) Select **See additional information about what you are signing**.



- c) Review the information in the **Additional Information** dialog box.

A message warns you that there might be hidden information in the document you're signing.
- d) Select **OK** to return to the **Sign** dialog box.

- e) Examine the custom message in the **Sign** dialog box.

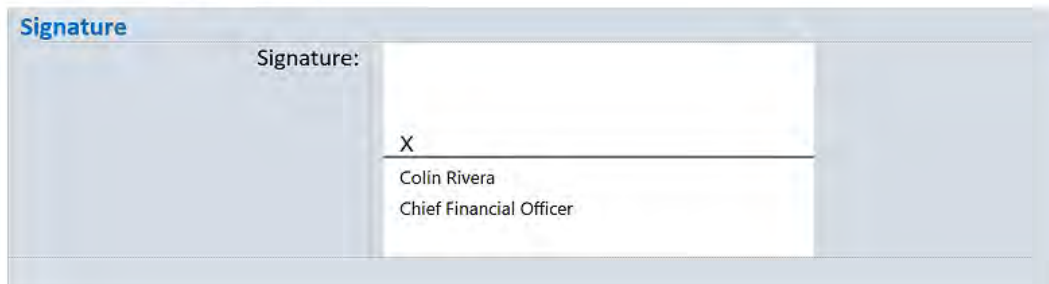


You are reminded to change the word STATUS to accepted or rejected before signing.

- f) Select **Cancel**.
2. Set the approval status before signing.
- a) Replace the word **STATUS** with *accepted*

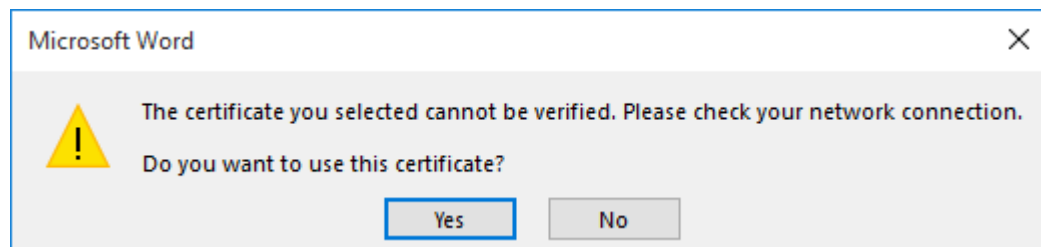
Disposition

Application has been accepted.



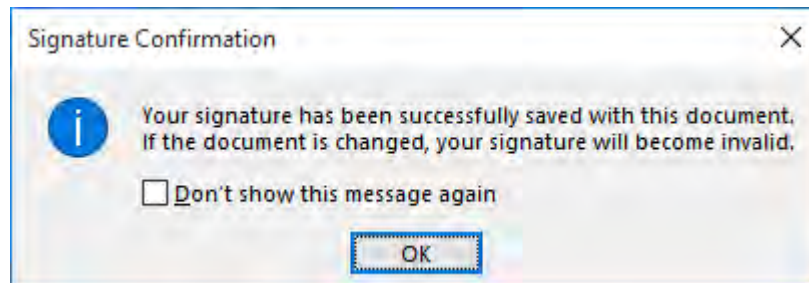
3. Sign the document
- a) Right-click the digital ID placeholder and select **Sign**.
- b) In the **Sign** dialog box, select **Select Image**.
- c) In the **Insert Pictures** dialog box, in the **From a file** section of the dialog box, select **Browse**.

- d) From the **Desktop\Projects\Securing a Document** folder, select **colin_rivera_signature.png** and then select **Select**.
The signature graphic has been added to the document as a visual indication that the document has been signed.
- e) Select **Details**.
- f) Enter an address, city, state, and ZIP code, and select **OK**.
- g) Examine the **Signing as** text box.
You will sign with the certificate you created. If other certificates were available to your computer, you could choose them here by selecting the **Change** button.
- h) Select **Sign**.

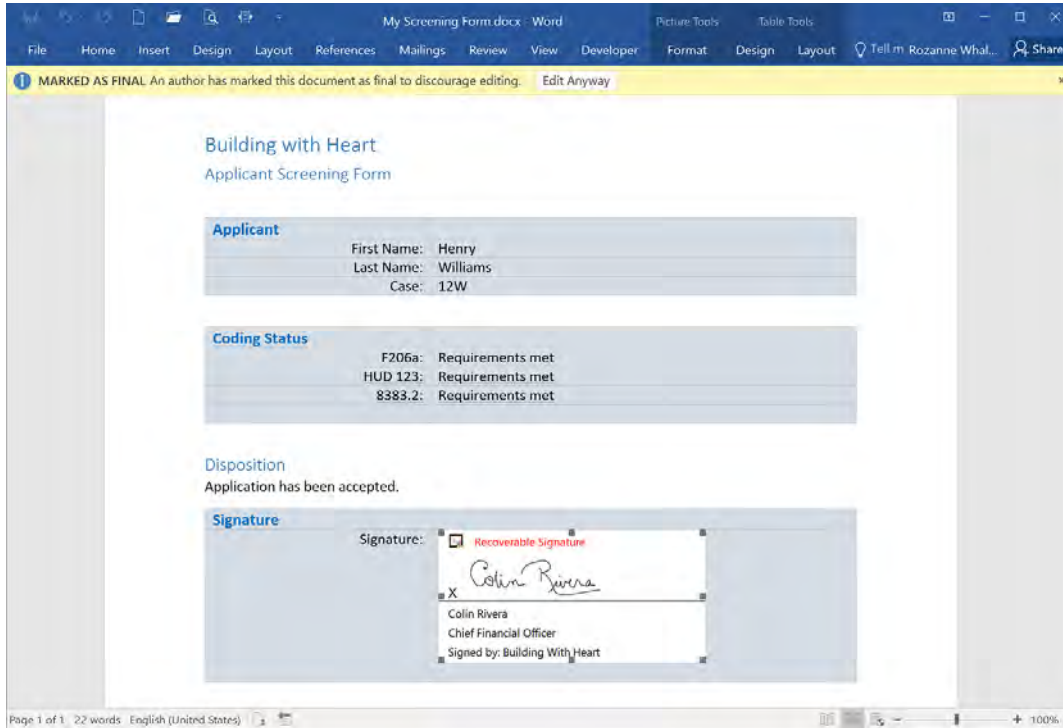


Because you created your own certificate rather than using one from a certifying authority, it cannot be verified.

- i) Select **Yes**.



j) Select **OK**.



k) Observe that the document is marked as final and that a message stating this is displayed at the top of the document. Word displays the signature image you selected in the digital ID placeholder. The message "Recoverable Signature" is shown because you generated your own certificate, which cannot be verified by a trusted certifying authority.

4. Test the digital signature.

- In the message bar, select **Edit Anyway**.
- Observe that a **Microsoft Word** message box is displayed indicating that editing will remove the signatures in the document.
- Select **No**.
After you have signed a document, you can't modify it without removing the signature.

5. Save and close the document.

Summary

In this lesson, you removed sensitive information from Word documents and took measures to prevent unauthorized access or changes to the contents of Word documents.

Which of the security measures introduced in this lesson do you think you might use?

What other security measures might you take to protect sensitive information?



Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

6

Using Forms to Manage Content

Lesson Time: 30 minutes

Lesson Objectives

In this lesson, you will:

- Add form fields to a document.
- Modify a form.

Lesson Introduction

In your work, you may need to collect the same type of information repeatedly from coworkers or customers. Forms are a familiar and standard way of gathering the data in a consistent manner. Electronic forms can easily be filled out and sent through email to the right person. You can use Word's forms feature to consistently capture and collect standard information.

TOPIC A

Create Forms

Almost every business uses forms to collect standard information. Today, a form can be a printed or electronic document. Either on paper or on a computer screen, the form prompts the user to fill in the various fields to gather a consistent set of data. In this topic, you will create one type of form in Word.

When you are collecting a standard set of information from a large group of people, trying to question them from memory or noting down the answers in a document might lead to inconsistencies or loss of important details. A form containing fields to enter all of those necessary details helps you to ask for the required information and capture it in an organized format.

Forms

A *form* is a document used for collecting information in a consistent format. Both paper-based and electronic forms contain boilerplate text such as the form title, labels, and fields. Users can enter information in these fields but they are not able to alter the form.

Plan a Form

Before you begin creating a form in Word, you should decide what information you want to collect and where you want the information to appear in the form. You also need to consider how the form will be distributed and whether or not you want to protect the form from modifications. When you begin creating the form, consider using a table to contain the various form fields. Tables allow you to control the form's layout with more precision.



Note: Planning a form can be easier if you start with an existing paper form or diagram the new form on paper. Designing the form on paper can save you time when you start inserting the form fields in Word.

Form Fields

A *form field* is a container inserted into a form used for collecting a specific type of information. Each form field has a name signifying the type of entry it requires. Form fields also have their own set of options. These options can be used to determine the type and format of data that a user is allowed to enter and how the input is captured. You can use content controls or legacy form fields to create a form. It is recommended that you do not mix content controls and legacy form fields in the same document.

The Controls Group

On the **Developer** tab, the **Controls** group contains tools to insert document elements such as form fields and content controls. The group contains eight content controls, control tools, and the **Legacy Tools** palette that holds legacy form fields and ActiveX controls. You can use the **Controls** group's **Properties** button to modify the properties of the selected control.

Content Controls

You use *content controls* to prompt the user for specific information in documents such as forms and document templates. Content controls enable you to create visual form fields without knowing a programming language. For example, using the **Date Picker** content control, the user can select a

date from a pop-up calendar for a date field. Content controls are not compatible with Word 2003 or earlier versions. Extracting the data from content controls for use in another application, such as a database, requires programming with a scripting language such as Visual Basic for Applications (VBA).

On the **Developer** tab, in the **Controls** group, there are nine content control tools.

Content Control Tool	Description
Rich Text	Enables the user to enter formatted text and special characters, such as a tab. From this type of control, the Tab key cannot be used to move focus to the next control.
Plain Text	Enables the user to enter unformatted text. Has a property to allow carriage returns in the field.
Picture	Enables the user to paste a picture into the control.
Building Block Gallery	Enables the user to select and insert a Building Block from a designated gallery of document Building Blocks.
Check Box	Enables the user to indicate a choice by selecting or deselecting the symbol in the check box.
Combo Box	Enables the user to select one choice from a preset list, or type in a choice.
Drop-Down List	Restricts the user to selecting one choice from a preset list. The user cannot enter text in this list.
Date Picker	Enables the user to select a date from a pop-up calendar.
Repeating Section	Enables the user to add additional sections of the form. For example, they could add another row to an order form with the same fields as an existing row on the form.



Caution: Use the **Rich Text** content control for text fields that might contain formatting such as subscript or superscript, and special characters such as a tab. However, the **Tab** key cannot be used to move to the next field from this type of content control.

Content Control Options

For most content controls, editing the properties is optional. For **Combo Box** and **Drop-Down List** controls, you need to specify the options from which users can select. The properties available for editing are different for different types of controls. For example, the **Date Picker** control has options to set the date format to be used, and the **Building Block** control allows you to specify which gallery and categories users can select content from.

Design Mode

Displaying a document containing content controls in **Design Mode** enables you to edit the contents of the placeholder text in the controls.

Legacy Tools

The **Legacy Tools** palette contains options to add legacy form fields and ActiveX controls. Find the legacy tools on the **Developer** tab in the **Controls** group.

Legacy Form Fields

Legacy form fields are used to enter data in a form and are compatible with Word 2003 or earlier versions. Legacy form fields appear shaded in a document. Unlike content controls, form fields can be used to collect and save the data in a delimited file to import into another application and enable you to print just data from the completed form. You can also restrict the type of character input in legacy form fields. When you add Help text to a form field, the text is displayed on the status bar when the form field is selected.

ActiveX Controls

ActiveX controls are software components you can use to perform specific tasks and create interactive web forms. You can run ActiveX controls from within the Word application. ActiveX controls have access to the complete Windows® operating system.



Caution: If users of your form work in Word 2003 or an earlier version, create the form using the legacy form fields.

Form Fields

Each form field can be used to collect a particular type of data. A form containing legacy form fields must be protected before the form fields are active.

There are three main types of form fields.

<i>Form Field</i>	<i>Description</i>
Text	Used to collect textual, numeric, or date-related information.
Check box	Used to allow users to select several answers from several choices.
Drop-down	Used to allow users to select a single answer from several choices.

Form Field Options

The form field options vary based on the type of form field selected.

<i>Legacy Form Field</i>	<i>Options Include</i>
Text	Type of data that can be entered; default text to be displayed; maximum field length; text, number, and date formats; macro handling; bookmark names; and Help text options.
Check box	Check box size; default value; macro handling; bookmark names; and Help text options.
Drop-down	Drop-down items; item order; macro handling; bookmark names; and Help text options.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Work with Content Controls.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Add Legacy Form Fields to a Document.

ACTIVITY 6-1

Using the Controls Group

Data File

Desktop\Projects\Using Forms to Manage Content\Donation Form.docx

Before You Begin

You have added the **Developer** tab to the ribbon.

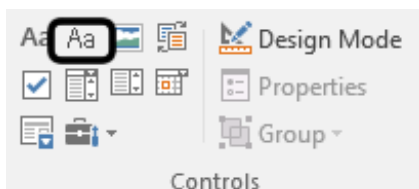
Scenario

The director of Building with Heart would like to have the same form for all donations made to the Greene City chapter. You are going to create a donation form that can be filled out as a Word document.

1. Add **Plain Text** content controls to the form.
 - a) From the **Desktop\Projects\Using Forms to Manage Content** folder, open **Donation Form.docx**.
 - b) Select the Donor table.
 - c) On the **Table Tools Layout** tab, in the **Table** group, make sure that **View Gridlines** is selected. The gridlines won't appear when printed, but they make it easier to locate cell boundaries when working with a table that is a solid color or has no borders.
 - d) Place the insertion point within the right column of the **First Name** row, as shown.

Donor	
First Name:	
Last Name:	
Address:	
City:	
State:	
Phone Number:	
Email Address:	

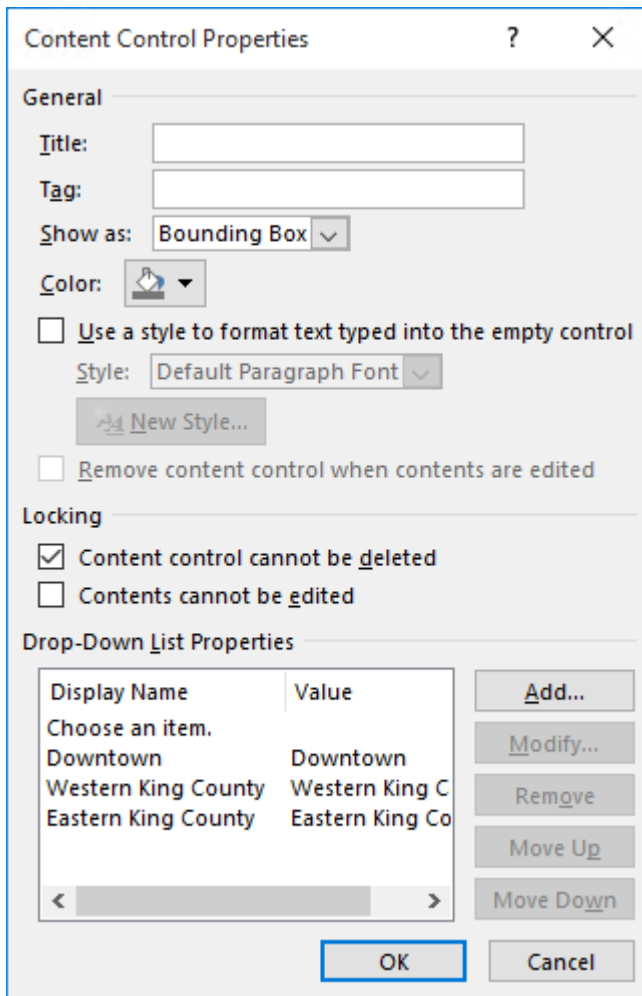
- e) Select the **Developer** tab.
- f) In the **Controls** group, select **Plain Text Content Control**.



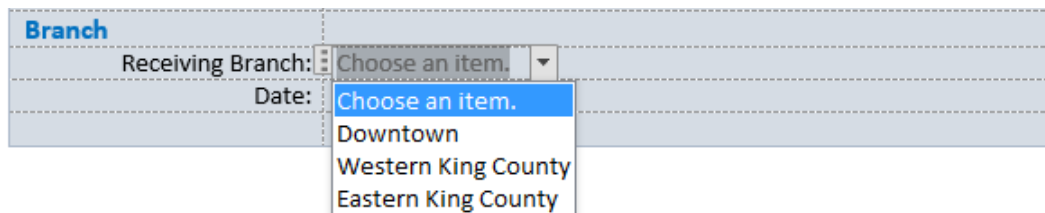
A plain text field is added to the table.

Donor	
First Name:	Click or tap here to enter text.
Last Name:	

- c) Select **Add**. In the **Display Name** text box, type *Eastern King County* and select **OK**.
You have added the three choices to the Branch drop-down list.



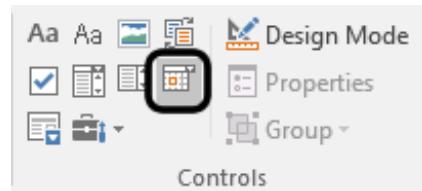
- d) Select **OK** to return to the document.
e) Select the drop-down list arrow in the Receiving Branch control.



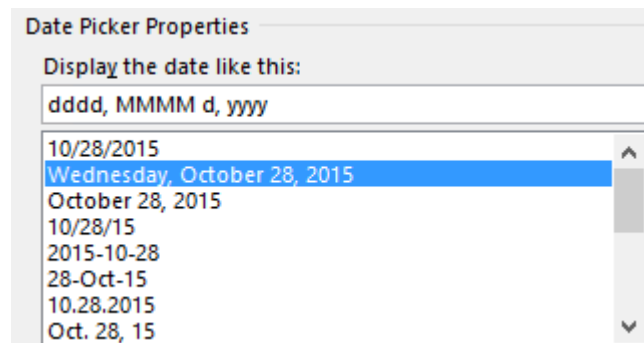
Items you added to the list are shown.

- f) Press **Esc** to hide the list.
4. Add a date control to the form.
- a) Place the insertion point in the blank cell to the right of **Date**.

- b) On the **Developer** tab, in the **Controls** group, select **Date Picker Content Control**.




5. Configure the format in which the **Date** will be displayed.
- With the **Date** control selected, in the **Controls** group, select **Properties**.
 - Under **Date Picker Properties**, select the second date type to show the day, month, date, and year.




- Select **OK**.
6. Display the form in **Design Mode**.
- In the **Controls** group, select **Design Mode**.
The controls display editable placeholder text when the document is in **Design Mode**.
 - In the control for the **First Name**, select the placeholder text **Click or tap here to enter text**.
 - Type ***First name and initial***
 - In the control for the phone number, select the placeholder text.
 - Type ***Enter direct number***
 - For the **Date** field, change the placeholder text to ***Today's date***
 - In the **Developer** tab, in the **Controls** group, select **Design Mode** to turn off **Design Mode**.
7. Save the file in the current folder (**Desktop\Projects\Using Forms to Manage Content**) as ***My Donation Form.docx***

Form Protection

Forms containing legacy form fields must be protected or locked in order for the form fields to function. Content controls do not need to be in a protected form to be active. However, it would be sensible to protect any form to prevent users from inadvertently modifying other parts of the form.

	Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Protect a Form .
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	Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Remove Password Protection from a Locked Form .
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ACTIVITY 6-2

Locking and Saving a Form

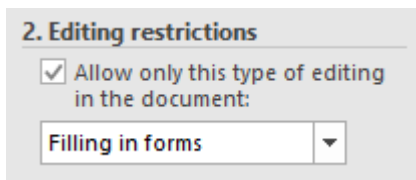
Before You Begin

My Donation Form.docx is open. The **Developer** tab is displayed.

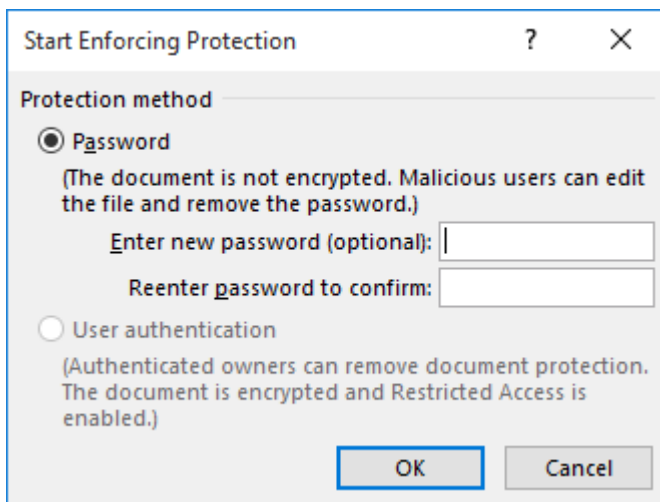
Scenario

Other users in the organization need to create forms like this, so you will save it as a template from which each person can create their own documents. To ensure that users can only fill in the form fields and not change the text, you will lock the form.

1. Set editing restrictions.
 - a) In the **Protect** group, select **Restrict Editing** to show the **Restrict Editing** pane.
 - b) In the **Editing restrictions** section, set the options as shown.



2. Start enforcing the restrictions you just set.
 - a) In the **Start enforcement** section, select **Yes, Start Enforcing Protection**.



- b) In the **Enter new password (optional)** text box, type *protectForms*
 - c) In the **Reenter password to confirm** text box, type *protectForms*
 - d) Select **OK**.
3. Save the form as a template.
 - a) Select **File**→**Save As**.

- b) Select the current folder.
 - c) In the **Save as type** list, select **Word Template (*.dotx)**.
The path where the file will be saved automatically changes to the default location for custom Word templates.
 - d) In the **File name** text box, change the file name to **My BWH Donation**
 - e) Select **Save**.
4. Open the document as a form.
- a) Select **File→New**.
 - b) Select **PERSONAL**.
 - c) Select **My BWH Donation**.
 - d) Next to the **Receiving Branch** content control, select the drop-down arrow and select **Downtown**.
 - e) Next to the **Date** content control, select the drop-down arrow and select **Today**.
 - f) Fill in the remainder of the form, except for the one-time gift.

Donor	
First Name:	Dan
Last Name:	Smith
Address:	123 Kenyon St
City:	Greene City
State:	RL
Phone Number:	555-555-1212
Email Address:	dan@smith.example
Donation	
Monthly gift of (USD) \$	30
One-time gift of:	Click or tap here to enter text.
Branch	
Receiving Branch:	Downtown
Date:	Monday, October 5, 2015

- g) Save the document in **Desktop\Projects\Using Forms to Manage Content** as **My Filled Form.docx**
- h) Close **My Filled Form.docx**.
The My BWH Donation.dotx template file is still open.

TOPIC B

Modify Forms

You have started setting up a form in Word with different types of content controls and have protected it from unintentional (or intentional) changes with a password. But you might not get it right the first time. You can easily modify your form by adding and removing fields as needed.

As the form designer, you know how the form is supposed to work. But when the user opens the form, they want it to be straightforward to use. As you roll out the form to users, you might receive feedback that the order of the fields is awkward or that you are missing a field. You can easily add the necessary controls after you remove the password protection.

Content Control Title Tab

When you select a content control, you will see a title tab along one side of the control. This tab is used to select the content control before you can delete it. By default, the tab contains three dots. You can modify the content control's properties to add a text title to this tab by entering text in the control's **Title** property. The tab is only visible when the content control is selected.

Extracting Data from Forms

After you've collected numerous form documents containing data, you'll probably want to extract the data entered by users so you can use that data elsewhere. For example, you might want to copy it to an Excel® spreadsheet or a database of some sort. You could use copy and paste, but that would be tedious and time-consuming if you have many forms. Another option is to create a Word VBA macro to automatically transfer the form content to a format suitable for your needs.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Remove Form Fields and Content Controls.

ACTIVITY 6–3

Removing Controls from a Form

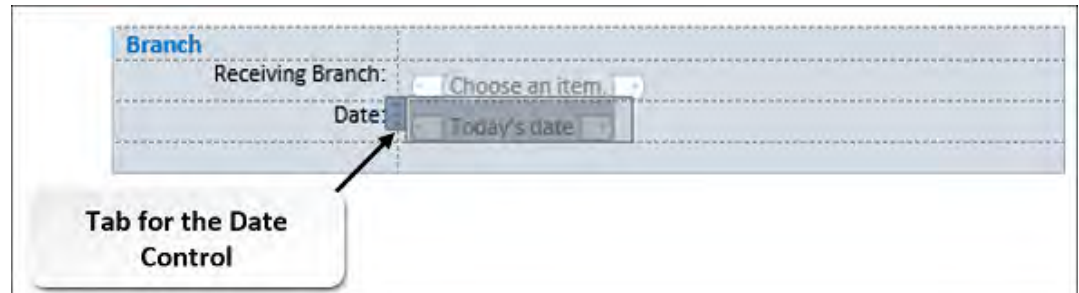
Before You Begin

My BWH Donation.dotx is open, and the **Developer** tab is displayed.

Scenario

After reviewing the working form, you decide to make some modifications to the template. You will delete the **Today's Date** field. Before you can change the form template, you need to remove the protection. When you are done editing, you will protect the form from editing again, but you will not require a password to unlock the form.

1. Unlock the form template.
 - a) Make sure the **Restrict Editing** pane is still showing.
 - b) In the **Restrict Editing** task pane, select **Stop Protection**.
 - c) In the **Unprotect Document** dialog box, in the **Password** text box, type *protectForms* and select **OK**.
2. Remove a content control from the form.
 - a) Select **Design Mode**.
 - b) Select the **Today's Date** content control, and then select its tab.



- c) Press **Delete**.
 - d) Delete the text **Date**.
3. Protect the template.
 - a) Deselect **Design Mode**.
 - b) In the **Restrict Editing** task pane, select **Yes, Start Enforcing Protection**.
 - c) Select **OK** to protect the form with an empty password.
 - d) Close the **Restrict Editing** pane.
 - e) Save the template and close the file.

Summary

In this lesson, you created an electronic form in Word. You can make it easy for users to enter text or make selections from lists by using content controls in your form. By designing your form logically, you'll be sure to collect all the information you need to do your work.

What elements should be included in an effective form?

How could you use forms in your work?



Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

7

Automating Repetitive Tasks with Macros

Lesson Time: 50 minutes

Lesson Objectives

In this lesson, you will:

- Automate tasks using macros.
- Create a macro.

Lesson Introduction

Word includes a huge array of features that help you accomplish a wide array of tasks quickly and efficiently. However, as powerful as it is, there are times when you might wish for a particular feature that Word doesn't include. Fortunately, Word includes a powerful macro programming capability that enables users to extend Word's capabilities.

TOPIC A

Automate Tasks by Using Macros

Macros provide a powerful toolkit that enables you extend Word's built-in capabilities.

Macros

The term *macro* comes from the idea that a program like Word provides all sorts of small, simple, or "micro" commands, such as the commands to make text bold or italic or to change the alignment of a paragraph. Sometimes, users find that they need to perform a certain combination of these micro commands over and over again. For example, if you publish a newsletter, you might pull a copy of a quote from each article (a "pull quote") that you place in a text box within the article.

Each time you edit an article, you might perform a number of micro commands, such as: copy a quote from the article, create a text box, paste the text in the text box, apply formatting to the text, and so forth. In Word, you can combine a set of repeatable commands like this into a single macro command (or simply, a "macro"). You can run a macro by using a single mouse click or keyboard shortcut.

Macros can actually be more than just a set of commands that are performed exactly the same way each time. Macros are "smart" and can behave differently based on such things as the current location of the insertion point (Is it inside a table? Inside a text box?). Macros can also reach outside of Word, retrieving data from a database, launching and accessing data from other programs (such as Microsoft® Excel® or Access®), and so forth.

Each macro must have a unique name within the document in which it is stored. Macros are usually stored in templates (so they can be available to any document based on that template), but can also be stored in documents. If you want the macro to be available to all of your documents, store it in a global template such as the Normal template.

For security, a template or document should have a different file extension than other templates and documents if you want to be able to run its macros. Instead of having DOTX and DOCX file extensions for regular template and document files, files that contain macros have DOTM and DOCM extensions.

The Macros Dialog Box

You access existing macros from the **Macros** dialog box. You can run, edit, create, and delete macros from this dialog box. If you are troubleshooting a macro, you can use the **Step Into** button to step through the macro to locate the step within the macro that is not working properly. The **Organizer** button displays the **Organizer** dialog box, where you can copy macros from one template or file to another. The **Macros** dialog box lists the macros stored in the selected file.



Note: The macros in the **Macro name** list are the macros from the file selected in the **Macros** in drop-down list.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Automate Tasks Using Macros.

ACTIVITY 7-1

Automating Tasks by Using Macros

Data Files

All files in Desktop\Projects\Automating Repetitive Tasks with Macros\Forms

Before You Begin

Verify that the **Developer** tab is displayed.

Scenario

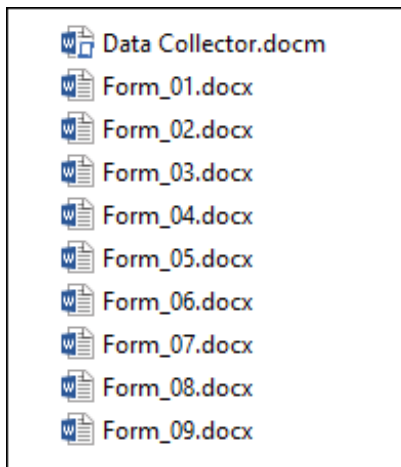
You have collected application forms from numerous applicants, and you want to collect the form data into a format that you can use in other programs, such as Excel. You will use a macro to pull the form data from each form, and output it to a single document.

The macro does the following:

- Ask the user how the data should be output:
 - A Word document
 - An Excel spreadsheet
- Open and read each Word .docx file that is stored in the same directory as the macro document.
- Accumulate the text from each form control into a list.
- Output the accumulated list of data to an Excel spreadsheet and/or Word document, based on the user's preference.

1. Examine data in the form documents.

- a) In File Explorer, view the contents of the **Desktop\Projects\Automating Repetitive Tasks Using Macros\Forms** folder.

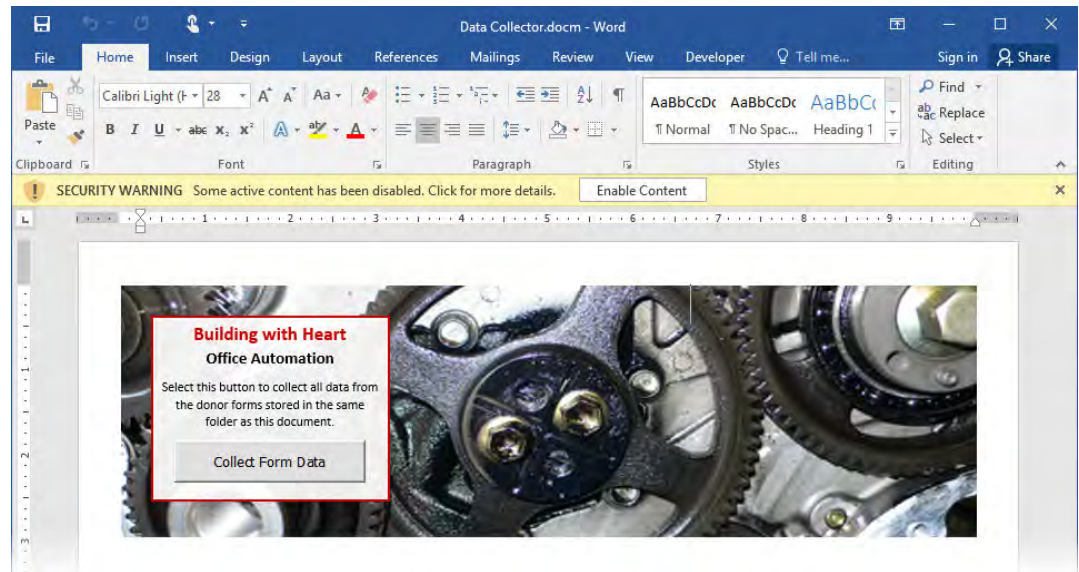


There is a single Word document that contains macros: Data Collector.docm. There are numerous normal (.docx) Word documents, which have been filled in with information.

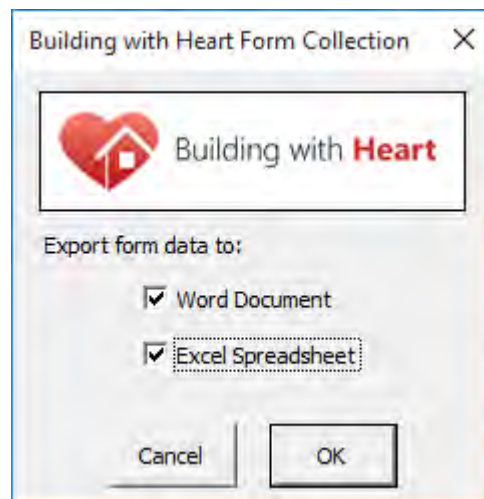
- b) Open **Form_01.docx** or one of the other form documents.

The document opens in Word. It contains a form that has been filled in with data. The other form documents contain data as well.

- c) Close the document.
2. Open the document containing the macro and enable macros.
 - a) Open **Data Collector.docm**.
The document opens in Word.



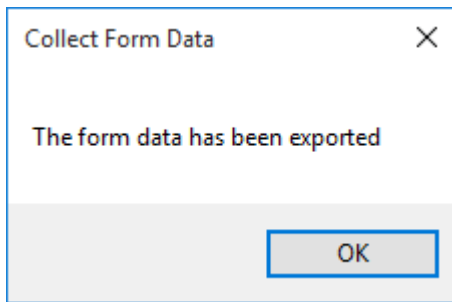
- b) In the **SECURITY WARNING** message, select **Enable Content**.
3. Run the macro.
 - a) In the document, select **Collect Form Data**.



A custom dialog box prompts you to select the type of documents you want to export the form data to. By default, **Word Document** and **Excel Spreadsheet** are checked.

b) Select **OK**.

The macro runs. When it finishes, a message is shown.

c) Select **OK**.d) Minimize the **Data Collector.docm** window.

4. Examine the macro results.

a) Examine the form data in the Word document.

First	Last	Address	City	State	Phone	Email	Monthly Amount	One Time Amount	Branch
John	Doe	34234 Ridge Road West	Greene City	RL	555-121-1222	jdoe@acme.example	100		Western King County
Gunther	Billingsley	74 Mathes Road	Silver Lake	RL	555-291-3234	billingsg@xyz.example		500	Western King County
Heather	Bashevitz	342 Lois Lane	Silver Lake	RL	555-291-2221	heather@gcrr.example		200	Western King County
Phil	Burnett	99 Winding Road	Greene City	RL	555-357-3537	pburnett@hollowgrinder.example	100		Eastern King County
Paul	Burnett	103 Winding Road	Greene City	RL	555-357-3537	burnettp@ldg.example	100		Eastern King County
William	Conrad	7 Dark Cul de Sac	Greene City	RL	555-563-5231	hod@gcrr.example	12		Western King County
Balthazar	Jones	314159 Descartes Circle	Greene City	RL	555-122-3229	jonesie@msx.example	80		Downtown
Nellie	Bly	1024 Central Blvd	Holden Point	RL	555-232-2032	Bly1974@gcdata.example		25	Western King County
Barnaby	Jones	45 Beverly Drive	Greene City	RL	555-545-9865	B.Jones@msx.example		2500	Downtown

The data has been imported and arranged in a Word table. The macro added table headings and applied a table style.

b) Close the Word document that contains the imported data, and do not save the document.

c) Examine the form data in the Excel spreadsheet.

	A	B	C	D	E	F	G	H	I	J	K	L
1	First	Last	Address	City	State	Phone	Email	Monthly Amount	One Time Amount	Branch		
2	John	Doe	34234 Ridge Road West	Greene City	RL	555-121-1222	jdoe@acme.example	100		Western King County		
3	Gunther	Billingsley	74 Mathes Road	Silver Lake	RL	555-291-3234	billingsg@xyz.example		500	Western King County		
4	Heather	Bashevitz	342 Lois Lane	Silver Lake	RL	555-291-2221	heather@gcrr.example		200	Western King County		
5	Phil	Burnett	99 Winding Road	Greene City	RL	555-357-3537	pburnett@hollowgrinder.example	100		Eastern King County		
6	Paul	Burnett	103 Winding Road	Greene City	RL	555-357-3537	burnettp@ldg.example	100		Eastern King County		
7	William	Conrad	7 Dark Cul de Sac	Greene City	RL	555-563-5231	hod@gcrr.example	12		Western King County		
8	Balthazar	Jones	314159 Descartes Circle	Greene City	RL	555-122-3229	jonesie@msx.example	80		Downtown		
9	Nellie	Bly	1024 Central Blvd	Holden Point	RL	555-232-2032	Bly1974@gcdata.example		25	Western King County		
10	Barnaby	Jones	45 Beverly Drive	Greene City	RL	555-545-9865	B.Jones@msx.example		2500	Downtown		

Word macros can not only perform tasks in Word, but they can also automate other applications, including other Microsoft Office applications, cloud-based application services, and so forth.

d) Close the Excel spreadsheet that contains the imported data, and do not save the document.

5. Maximize the **Data Collector.docm** document window.

Sources of Word Macros

You can obtain Word macros from a variety of sources. There are free download sites on the web, as well as commercial sources where you can buy macros. However, you should always be careful to obtain macros only from sources you have thoroughly vetted. Because macros are essentially programming code, it's possible that they might contain malware. Another option is to custom develop your own macros, either creating them yourself, or having a colleague or consultant create them for you.

Macro Security

As useful as macros are, they are also a vehicle hackers often use to get their malicious software on your computer. Macros use Visual Basic for Applications (VBA) programming code, which an unscrupulous hacker can use to add viruses to a document. For this reason, use macros only from a trusted source.



Note: Depending on your organization's needs, the administrator might have set the macro trust settings so that all macros are disabled in order to prevent macros from running.

Macro Security Components

Manage macro security settings through the **Trust Center**. In order for a macro to run in your document, the **Trust Center** evaluates several security settings before you can run the macro, including:

- A digital signature from the developer.
- That the digital signature is valid and has not expired.
- That the digital signature was issued by a reputable certificate authority.
- That the developer is a trusted publisher.

If the macro fails to pass any of the security risk evaluations, the macro is disabled and a message is displayed to indicate that there is a possibility that the macro is unsafe. If you are sure that the macro is safe, you can enable it through the **Trust Center**.

File Validation

File validation is a process that checks any file you attempt to open from an untrusted source to verify that it is a valid file. This is one way in which hackers can be thwarted from introducing macros with malicious code into your system.

Trust Center

In the **Trust Center**, you can set the security and privacy settings for Microsoft Word macros. The security components you can configure there are listed in the following table.

<i>Trust Center Option</i>	<i>Description</i>
Trusted Publishers	Lists any publishers that are to be trusted. Be sure to check the expiration date and remove any expired trusted publishers.
Trusted Locations	Any location listed in this section is considered secure, so be sure that a location is secure before you add a local or network path to the list. Any files in these paths will not go through the file validation process.

<i>Trust Center Option</i>	<i>Description</i>
Trusted Documents	Specify whether documents on the network should be trusted. You can also disable trusted documents and clear all trusted documents so that they are no longer trusted.
Trusted Add-in Catalogs	Enable you to use various online catalogs to determine which add-ins will be trusted.
Add-ins	Specify whether add-ins should be digitally signed by a certificate from a trusted publisher. You can also disable all add-ins.
ActiveX Settings	Enables you to specify conditions for trusting ActiveX components. You can also disable all controls.
Macro Settings	Specify whether to enable or disable macros. You can disable all macros with or without notification, or disable all macros except those that are digitally signed. Even though it is not recommended, you can also enable all macros.
Protected View	Enables you to specify conditions under which files should be opened in a protected view that disables potentially dangerous functionality. By default, files originating from the Internet, stored in unsafe locations, or delivered as Outlook® attachments are considered potentially dangerous and are opened in a protected view.
Message Bar	Specify whether or not a message bar is displayed when macros are blocked.
File Block Settings	Specify which types of files must be prevented from opening or opened in a protected view.
Privacy Options	Specify what information can be collected by Microsoft, and various document-specific settings related to privacy.

TOPIC B

Create a Macro

You have run a macro that was already created. In this topic, you will create your own macro. Creating macros will help you more quickly perform repetitive, lengthy tasks with a single click or by pressing the keys for a keyboard shortcut.

The Developer Tab for Macros

To create a macro, you use the **Developer** tab. You can also run or record a macro from the **View** tab, but the **Developer** tab has access to all of the tools you need to record, edit, organize, and run macros.



Note: The **Developer** tab is not displayed by default.

VBA

Macros are created in *Visual Basic for Applications (VBA)*. VBA is a programming language embedded in Office applications. VBA programs run within the host application—for example, within Word or Excel. When you record a macro, it is saved as VBA code. You can view and edit the VBA code in the Visual Basic Editor.

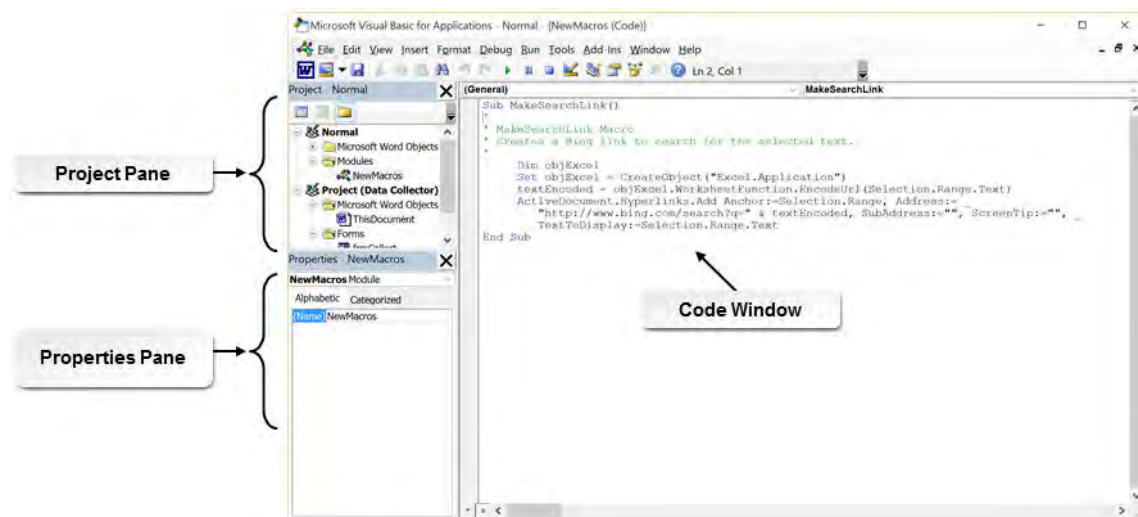


Figure 7-1: The Microsoft Visual Basic for Applications window.

The Visual Basic Editor interface has a **Project** pane that lists the VBA modules contained in all open documents and templates. The Normal template is listed, and each document is listed as a **Project**. If any templates besides Normal are open, they are listed as **Template Projects**.

Below the **Project** pane is the **Properties** pane. This lists the properties of the selected item in the **Project** pane.

To the right of the **Project** and **Properties** panes is the **Code** window. You can view and edit the code for the selected project in this window. Each macro that you record is saved in a block of VBA code. Blocks of code are stored in a *module*. Each macro within the module is listed as `Sub macro_name()` within the module.

Macro Project Components

In addition to code modules, macros can also include other components, such as custom dialog boxes, known as UserForms. A UserForm component defines the layout of a custom dialog box that the macro can present to the user.

In addition to custom dialog boxes, many other customizations are possible. For example, you can create your own custom ribbon tabs, groups, buttons, actions and task panes; provide keyboard shortcuts for macros; and embed other assets used by macros (such as AutoText, Styles, and so forth). Word macro projects can even access software components outside of Word, such as other Office applications, databases, speech, email, messaging, and other services installed on the computer.



Note: Macros just touch upon some of the customization capability built into Microsoft Office. To see some of the other ways a programmer can extend and enhance Microsoft Office, see <https://msdn.microsoft.com/en-us/library/bb386279.aspx> or search the web for articles on **Developing Microsoft Office Solutions**.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on **How to View a VBA Macro Project**.

ACTIVITY 7-3

Viewing the Code for an Existing Macro

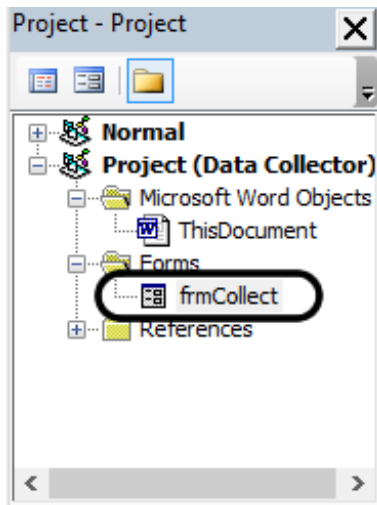
Before You Begin

You have opened **Data Collector.docm** in Word, and you have enabled the **Developer** tab in the ribbon.

Scenario

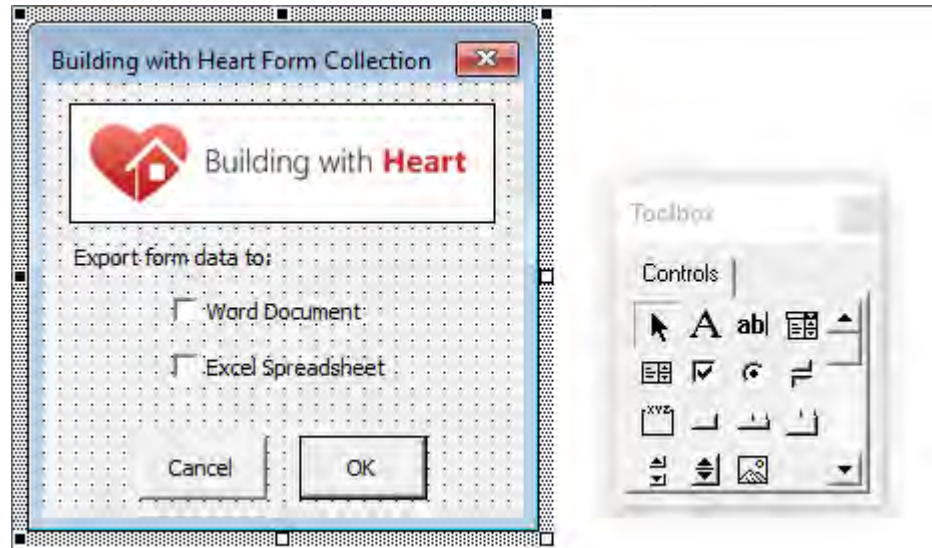
You've used the form data collection macro, and would like to examine its code so you can get a better understanding of how it works.

1. Open the VBA programming tool.
 - a) On the **Developer** tab, in the **Code** group, select **Visual Basic**.
 - b) If the **Microsoft Visual Basic for Applications - Data Collector** window is not maximized, then select the **Maximize** button.
2. Examine the collection dialog box.
 - a) In the **Project - Project** pane on the left side of the window, double-click **frmCollect**.



- b) If the **Toolbox** window is covering the **Building with Heart Form Collection** user form, drag its title bar to move it to a different location.

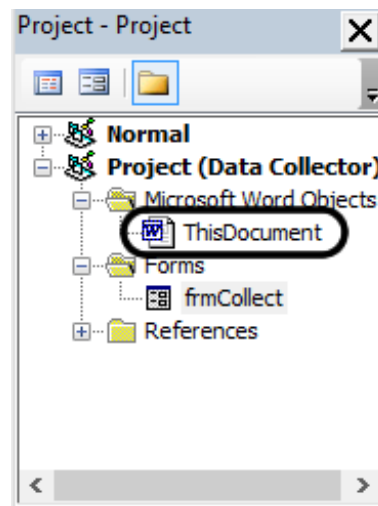
- c) Examine the dialog box layout.



The VBA development tools enable you to develop your own custom dialog boxes like this one. This is the dialog box that was shown when you ran the macro.

3. Examine the macro code.

- a) In the **Project - Project** pane on the left side of the window, double-click **ThisDocument**.



- b) Examine the VBA code, scrolling to view the whole module.

The green text contains comments written by the programmer, which explain what the code does. Notice also that comments are preceded by a single quote mark.

4. In the **Microsoft Visual Basic for Applications** window, select **File→Close and Return to Microsoft Word** to close the programming editor.
5. Close the **Data Collector.docm** document. If you're prompted to save changes, select **Don't Save**.

Macro Creation

Word's macro recorder enables you to perform a series of tasks in Word as Word records those tasks as VBA macro code. By using the macro recorder, you can create some macros without having to write a single line of VBA code. Once you've recorded a macro, you can run the macro, and the same set of steps you recorded will be performed again.

Although the macro recorder is a good means to start creating a macro, recorded macros often don't exactly match the tasks you performed. Furthermore, there are some kinds of tasks, such as pulling data from a web server, that you simply can't perform and have the macro properly record what you did. In these cases, you'll need to write your own VBA code from scratch or edit code that you recorded.

You can record mouse clicks and keystrokes in a macro. If you need to select text as part of the macro recording, it must be done with the keyboard rather than with the mouse. You will want to plan your macro before you begin recording, because every mouse click and key press will be recorded as part of the macro. Of course, you can use the VBA code editor to delete any extra statements that were recorded.

The Record Macro Dialog Box

When you record a macro, the **Record Macro** dialog box is displayed. In this dialog box, you specify the name for the macro, and you can optionally assign it to a button or a keyboard shortcut. You can also add a description.



Note: It is a good idea to include the keyboard shortcut combination in the **Description** for the macro.

Macro Names

A macro name must be unique within the file in which it is stored. The name must begin with a letter and the name cannot contain any spaces. The name can be composed of letters, numbers, and the underscore, but no other special characters.

Keyboard Shortcuts for Macros

When you are creating a macro, you can assign a keyboard shortcut to press to run the macro. In order to make sure you don't assign a key combination that is already assigned to something in Word, check the **Current keys** section of the **Customize Keyboard** dialog box. If the key combination is already assigned, the assignment is listed in the dialog box. If it is already assigned and you don't use that key combination, you can reassign it to your macro. If you want to change the key combination you are assigning, press **Backspace** to remove what you have in the **Press new shortcut key** box, and then press a new key combination.

If you forget which keyboard shortcut you assigned to a macro, or if you want to change the shortcut key combination, use the **Customize Ribbon** dialog box to access the **Customize Keyboard** dialog box. There, the current keyboard shortcut is listed. You also have the opportunity to assign a new keyboard shortcut.



Access the Checklist tile on your CHOICE Course screen for reference information and job aids on How to Create a Macro.

ACTIVITY 7-4

Recording a Macro

Data File

Desktop\Projects\Automating Repetitive Tasks with Macros\Types of Risks.docx

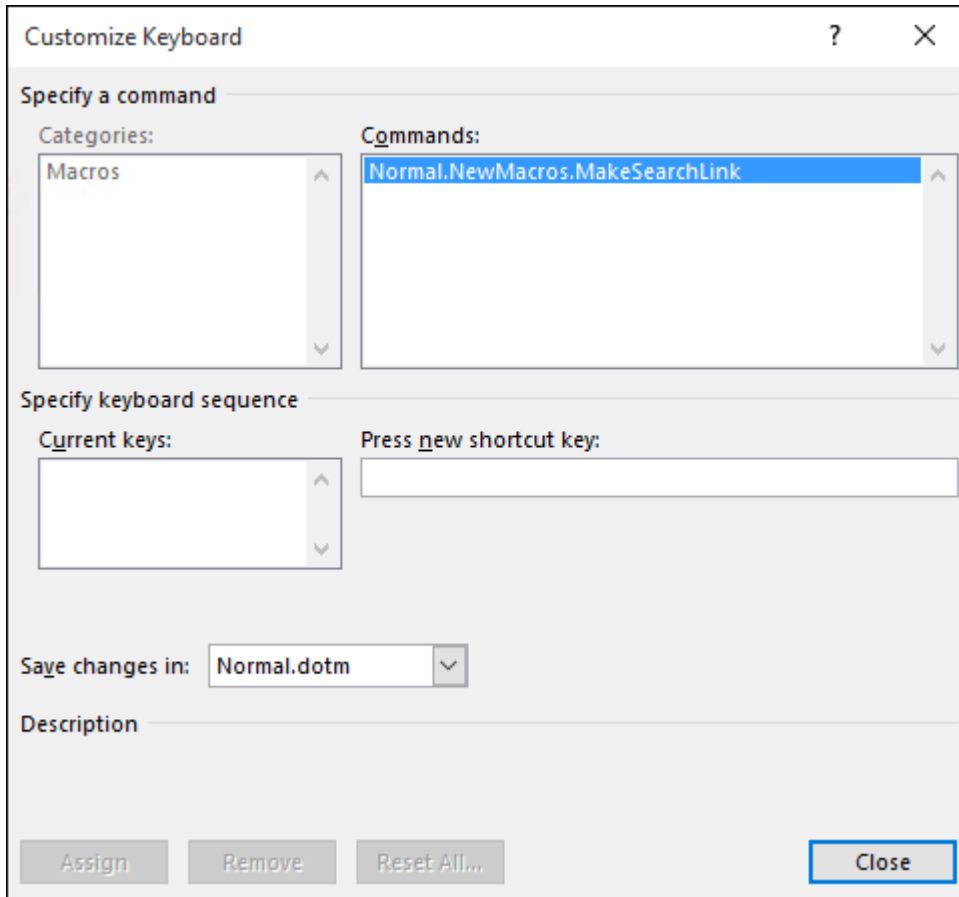
Scenario

In documents you create for training within your organization, you like to provide links to a web search related to the various key phrases in the document to encourage learners to research topics further on the web. For example, for the text "risk management", you would provide a link to a Bing search on the phrase "risk management".

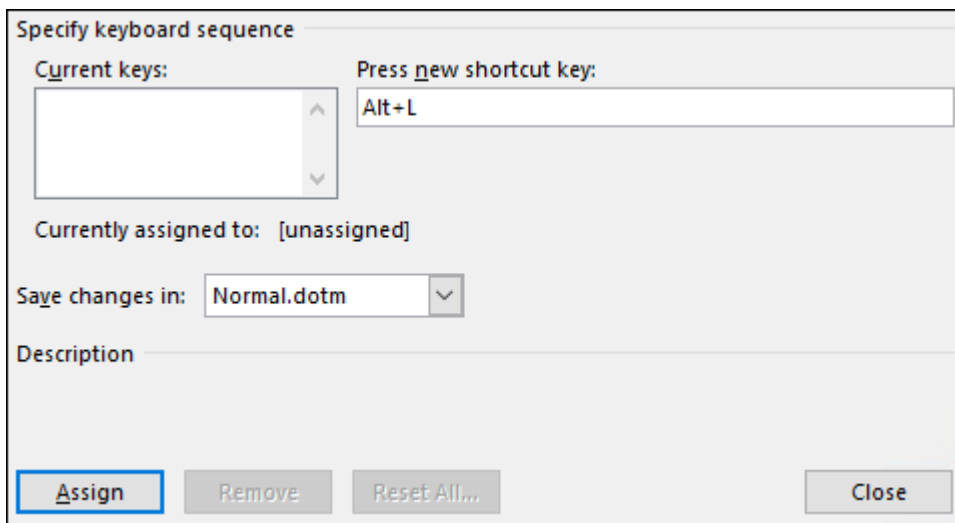
Typically, creating such links involves a lot of typing or copying and pasting, so you will create a macro to automate this task. You will start by recording the macro. Then you will edit the recorded macro to make it work without any additional human intervention.

-
1. Try out the search URL.
 - a) Launch a web browser, and enter the following URL: *http://www.bing.com/search?q=risk*
This loads the Bing search engine. The topic you typed after the equals sign is used as the search topic. Results for the search term "risk" are shown.
You will create a Word macro that creates a hyperlink for the text that you've selected before running the macro. The hyperlink will begin with *http://www.bing.com/search?q=*, followed by the search term.
 - b) Close the browser window.
 2. Open a document and record a macro.
 - a) From the **Desktop\Projects\Automating Repetitive Tasks Using Macros** folder, open **Types of Risks.docx** in Microsoft Word.
 - b) In the paragraph beneath the **Types of Risks** heading, select the text **mitigate risks**.
 - c) On the **Developer** tab, in the **Code** group, select **Record Macro**.
 - d) In the **Record Macro** dialog box, in the **Macro name** box, type *MakeSearchLink*
 - e) In the **Store macro in** list box, verify that **All Documents (Normal.dotm)** is selected so that the macro is available in all new documents based on the Normal template.
 - f) In the **Description** text box, type *Creates a Bing link to search for the selected text*.

g) Select **Keyboard**.



- h) In the **Press new shortcut key** text box, press **Alt+L**.
 i) Notice that this key combination is shown to be currently unassigned.



- j) Select **Assign**.
 The **Current keys** box now lists **Alt+L**.
 k) Select **Close**. The mouse pointer has a **Tape** icon attached to it.



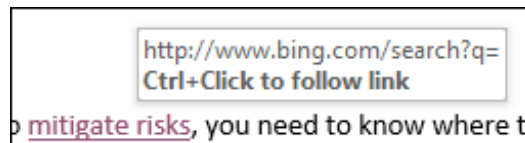
Note: Take your time as you work through the steps. You don't have to hurry simply because the macro recorder is on.

3. Record the steps to assign a link to the selected text.
 - a) Press **Ctrl+K**.

This is the shortcut key to create a hyperlink.
 - b) In the **Link to** list, make sure **Existing File or Web Page** is selected.
 - c) In the **Address** text box, type *http://www.bing.com/search?q=*
 - d) Select **OK**.
 - e) On the **Developer** tab, in the **Code** group, select **Stop Recording**.

4. Clear the hyperlink and test the macro.
 - a) Right-click within **mitigate risks**, and select **Remove Hyperlink**.
 - b) Select the text **mitigate risks**.
 - c) Press **Alt+L** to run the macro from its shortcut.

The link has been created again.
 - d) Position the mouse pointer over the link to view the destination URL.



The link doesn't yet include a search term. Because the search term will be different for each term you apply the link to, you'll need to program the macro to create the search term based on the text that is selected.

ACTIVITY 7-5

Adding Custom Code to a Recorded Macro

Data File

Desktop\Projects\Automating Repetitive Tasks with Macros\Macro.txt

Before You Begin

Types of Risks.docx is open, and you have recorded a macro to insert a hyperlink.

Scenario

Recorded macros don't enable you to reach the full power of VBA. Often, recording adds extra commands that may cause a macro to "break" on other computers. In other cases, some commands you performed may not play back exactly as you intended. And often, you want a macro to behave differently depending on the context, rather than doing things exactly the same way each time. In such cases, you'll need to write custom code to improve upon the efforts of the macro recorder.

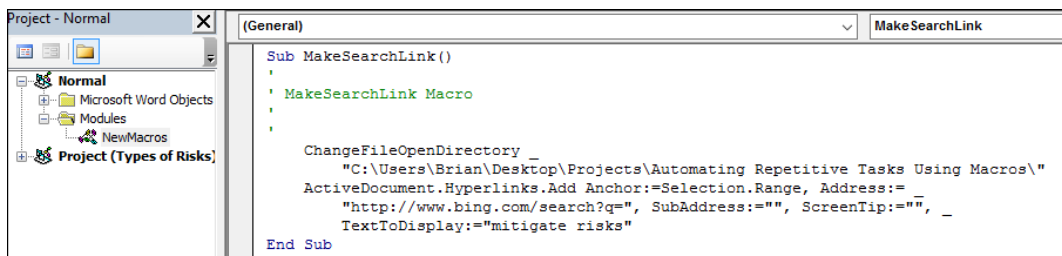
In the present example, the recorder has added a command that will cause the macro to "break" on other computers. You will delete the unnecessary command. Furthermore, you want the link to produce a different URL each time, based on the text that the user selected before running the macro. You will make these modifications to your recorded macro.

1. Examine the VBA code for the macro you just created.

- a) On the **Developer** tab, in the **Code** group, select **Macros**.

The macro you created is listed. From here, you can run or edit the macro. This is where you'd have to go to run a macro if you hadn't provided a keyboard shortcut.

- b) Select **Edit**.
- c) Examine the macro.



The macro is saved in the NewMacros code module, within Normal.dotm. Because it is in Normal.dotm, it will automatically be available to all new Word documents based on that template.

- d) Select **File**→**Save Normal**.

The Normal template is saved, including the new macro.

2. Delete a statement that is not needed.

- a) Examine the macro code.

The macro recorder may have created a **ChangeFileOpenDirectory** command. If it did, you may observe that it is hard-coded to refer to your user directory. This will cause the macro to break if you run it on another computer that does not have this user directory. Often, based on the context of how and when you recorded the macro, the recorder records unnecessary commands that you can delete.

- b) If the `ChangeFileOpenDirectory` command is present in your recorded code, delete it.

Before:

```
Sub MakeSearchLink()
'
' MakeSearchLink Macro
' Creates a Bing link to search for the selected text.
'
' ChangeFileOpenDirectory _
' "C:\Users\Brian\Desktop\Projects\Automating Repetitive Tasks Using Macros\"
ActiveDocument.Hyperlinks.Add Anchor:=Selection.Range, Address:=
"http://www.bing.com/search?q=", SubAddress:="", ScreenTip="", _
TextToDisplay:="mitigate risks"
End Sub
```

After:

```
Sub MakeSearchLink()
'
' MakeSearchLink Macro
' Creates a Bing link to search for the selected text.
'
'
ActiveDocument.Hyperlinks.Add Anchor:=Selection.Range, Address:=
"http://www.bing.com/search?q=", SubAddress:="", ScreenTip="", _
TextToDisplay:="mitigate risks"
End Sub
```



Note: The `ChangeFileOpenDirectory` command may appear across **two lines**. If so, make sure you delete *both* lines of code.

3. Modify the statement to set the display text based on the current text selection.
- a) Examine the text that is assigned to `TextToDisplay`.

```
ActiveDocument.Hyperlinks.Add Anchor:=Selection.Range, Address:=
"http://www.bing.com/search?q=", SubAddress:="", ScreenTip="", _
TextToDisplay:="mitigate risks"
```

The `TextToDisplay` value contains the underlined text that appears in the document. In the current code, it will always be assigned to "mitigate risks", because that's the text that was selected when you ran the macro. You need to change this so that the text selected in the Word document will be used as the `TextToDisplay` value.

- b) Edit the code, changing the last line as shown.

```
Sub MakeSearchLink()
'
' MakeSearchLink Macro
' Creates a Bing link to search for the selected text.
'
'
ActiveDocument.Hyperlinks.Add Anchor:=Selection.Range, Address:=
"http://www.bing.com/search?q=", SubAddress:="", ScreenTip="", _
TextToDisplay:=Selection.Range.Text
End Sub
```

As you type, code help is shown in a drop-down list. If the list is still showing after you have finished typing the code, you can press **Esc** to hide the list.

4. Write code to create the search text.

- a) Add three lines of code to the macro as shown:

```
Sub MakeSearchLink()
'
' MakeSearchLink Macro
' Creates a Bing link to search for the selected text.
'
  Dim objExcel
  Set objExcel = CreateObject("Excel.Application")
  textEncoded = objExcel.WorksheetFunction.EncodeUrl(Selection.Range.Text)

  ActiveDocument.Hyperlinks.Add Anchor:=Selection.Range, Address:=
    "http://www.bing.com/search?q=", SubAddress:="", ScreenTip:="", _
    TextToDisplay:=Selection.Range.Text
End Sub
```



Note: Capitalization matters in VBA programming code, so be sure to capitalize the new code *exactly* as shown.

Spaces and certain other characters aren't generally allowed in a URL, so if the search text includes a space (as in "mitigate risks"), simply appending the phrase to the URL will be problematic. You need to prepare the text to be part of a URL. Fortunately, Microsoft Excel has a function that does this.

The first and second lines of code essentially gain access to the Excel application. VBA macros can call upon functionality in any of the Office applications.

The third line of code gets the currently selected text (Selection.Range.Text) from the Word document and then uses Excel's EncodeUrl worksheet function to make the text URL ready.

After these three lines of code run, a container named textEncoded will contain the text that can be added to the search URL.

5. Append the encoded search term to the URL.

- a) Insert the code *& textEncoded* after the URL text as shown.

```
Sub MakeSearchLink()
'
' MakeSearchLink Macro
' Creates a Bing link to search for the selected text.
'
  Dim objExcel
  Set objExcel = CreateObject("Excel.Application")
  textEncoded = objExcel.WorksheetFunction.EncodeUrl(Selection.Range.Text)

  ActiveDocument.Hyperlinks.Add Anchor:=Selection.Range, Address:=
    "http://www.bing.com/search?q=" & textEncoded, SubAddress:="", ScreenTip:="", _
    TextToDisplay:=Selection.Range.Text
End Sub
```

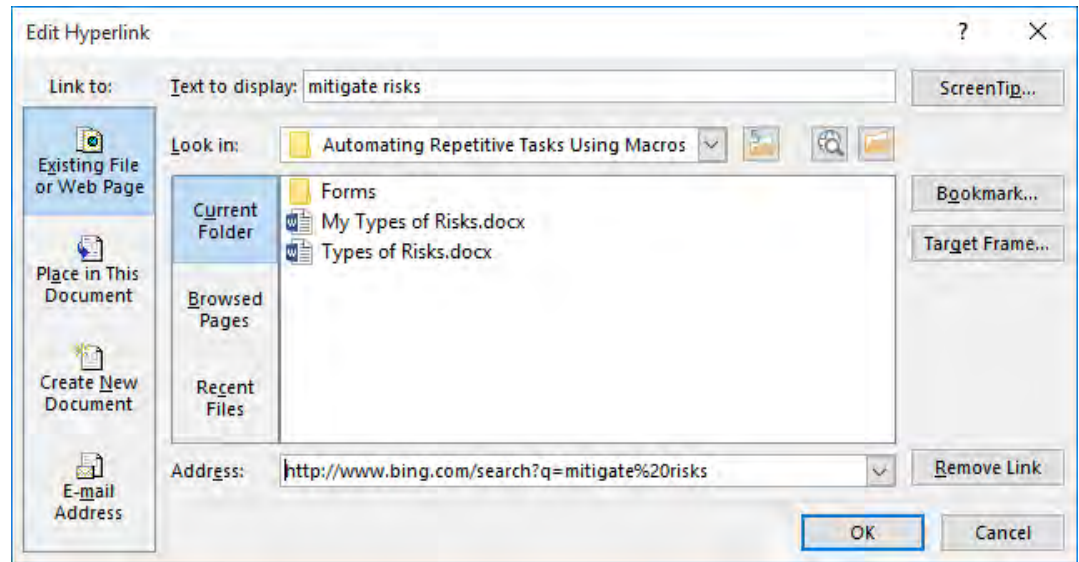
6. Save the macro and return to the document.

- a) Select **File→Save Normal**.
The macro is updated in the Normal template.
- b) Select **File→Close and Return to Microsoft Word**.

7. Clear the hyperlink.

- a) Right-click within **mitigate risks**, and select **Remove Hyperlink**.
- b) Select the text **mitigate risks**.
- c) Run the macro.
(You can either select the **Macros** button, select **MakeSearchLink**, and select **Run**; or press **Alt+L**.)

8. Test the macro.
 - a) Right-click the **mitigate risk** link text and select **Edit Hyperlink**.



The **mitigate risks** phrase is now part of the address. The space between **mitigate** and **risks** has been URL-encoded as %20.

- b) Select **Cancel**.
 9. Test a link for a different search term.
 - a) In the table, in the **Description** text for **Legal**, select the text **forensic practices**.
 - b) Press **Alt+L**.
 - c) **Ctrl+click** the **forensic practices** link.
A search for "forensic practices" is shown in the browser.
 - d) Exit the web browser.
 10. Close the document without saving your changes.
 - a) Select **File→Close** to close Types of Risks.docx.
 - b) Select **Don't Save**.
The macro is stored in Normal.dotm, so it's not necessary to save the Types of Risks.docx file to save the macro.
 11. Test the macro in a new document.
 - a) Create a new blank document.
 - b) Type *I've started learning how to create Word macros*.
 - c) Use the macro to apply a link to the text **how to create Word macros**.
 - d) Test the link to verify it produces a Bing search for "how to create Word macros".
 - e) Exit the browser and exit Word without saving the document.
-

Summary

In this lesson, you used a macro that someone else had written and saved to a document. Then you created your own macro and saved it to the global template, Normal.dotm, so that it is available in any document you create. Being able to record and run macros will save time when you have to perform a repetitive series of mouse clicks and keystrokes.

Do you have any tasks that you routinely perform that could benefit from being compiled into a macro?

What are some benefits and drawbacks to using macros?



Note: There's more you can do to restrict access to your documents. If you're interested in learning more, check out the LearnTO **Identify Three Key Principles of Office Security** presentation on your CHOICE Course screen.



Note: Check your CHOICE Course screen for opportunities to interact with your classmates, peers, and the larger CHOICE online community about the topics covered in this course or other topics you are interested in. From the Course screen you can also access available resources for a more continuous learning experience.

Course Follow-Up

Congratulations! You have completed the *Microsoft® Office Word 2016: Part 3* course. You have successfully used advanced Microsoft Word features that enable you to manipulate graphics and efficiently create, manage, revise, and distribute long documents and forms. Word provides time-saving features that enable you to work well in a collaborative mode. You have seen how to construct document elements that ensure your readers have access to pertinent information at the click of a button while at the same time protecting sensitive information.

What's Next?

This course is the third and last in the series of Microsoft® Office Word 2016 courses. Following your Word training, you might want to take any one of a number of Logical Operations courses focusing on various other applications in the Microsoft® Office 2016 suite, such as Microsoft® Office Excel® 2016 and Microsoft® Office PowerPoint® 2016.

You are encouraged to explore Word further by actively participating in any of the social media forums set up by your instructor or training administrator through the **Social Media** tile on the CHOICE Course screen.

A

Microsoft Office Word 2016 Exam 77–725

Selected Logical Operations courseware addresses Microsoft Office Specialist (MOS) certification skills for Microsoft® Office Word 2016. The following table indicates where Word 2016 skills that are tested on Exam 77-725 are covered in the Logical Operations Word 2016 series of courses.

<i>Objective Domain</i>	<i>Covered In</i>
1 Create and Manage Documents	
1.1 Create a Document	
1.1.1 Create a blank document	Part 1
1.1.2 Create a blank document using a template	Part 1
1.1.3 Open a PDF in Word for editing	Part 1
1.1.4 Insert text from a file or external source	Part 1
1.2 Navigate Through a Document	
1.2.1 Search for text	Part 1
1.2.2 Insert hyperlinks	Part 3, Topic 4-D
1.2.3 Create bookmarks	Part 3, Topic 4-C
1.2.4 Move to a specific location or object in a document	Part 1; Part 2
1.3 Format a Document	
1.3.1 Modify page setup	Part 1
1.3.2 Apply document themes	Part 2
1.3.3 Apply document style sets	Part 2
1.3.4 Insert headers and footers	Part 1
1.3.5 Insert page numbers	Part 1
1.3.6 Format page background elements	Part 1
1.4 Customize Options and Views for Documents	
1.4.1 Change document views	Part 1
1.4.2 Customize views by using zoom settings	Part 1
1.4.3 Customize the Quick Access toolbar	Part 1
1.4.4 Split the window	Part 1

Objective Domain	Covered In
1.4.5 Add document properties	Part 3, Topic 3-A
1.4.6 Show or hide formatting symbols	Part 1
1.5 Print and Save Documents	
1.5.1 Modify print settings	Part 1
1.5.2 Save documents in alternative file formats	Part 1
1.5.3 Print all or part of a document	Part 1
1.5.4 Inspect a document for hidden properties or personal information	Part 3, Topic 5-A
1.5.5 Inspect a document for accessibility issues	Part 1
1.5.6 Inspect a document for compatibility issues	Part 1
2 Format Text, Paragraphs, and Sections	
2.1 Insert Text and Paragraphs	
2.1.1 Find and replace text	Part 1
2.1.2 Cut, copy and paste text	Part 1
2.1.3 Replace text by using AutoCorrect	Part 1
2.1.4 Insert special characters	Part 1
2.2 Format Text and Paragraphs	
2.2.1 Apply font formatting	Part 1
2.2.2 Apply formatting by using Format Painter	Part 1
2.2.3 Set line and paragraph spacing and indentation	Part 1
2.2.4 Clear formatting	Part 1
2.2.5 Apply a text highlight color to text selections	Part 1
2.2.6 Apply built-in styles to text	Part 1
2.2.7 Change text to WordArt	Part 3, Topic 2-B
2.3 Order and Group Text and Paragraphs	
2.3.1 Format text in multiple columns	Part 2
2.3.2 Insert page, section, or column breaks	Part 2
2.3.3 Change page setup options for a section	Part 2
3 Create Tables and Lists	
3.1 Create a Table	
3.1.1 Convert text to tables	Part 1
3.1.2 Convert tables to text	Part 1
3.1.3 Create a table by specifying rows and columns	Part 1
3.1.4 Apply table styles	Part 1
3.2 Modify a Table	
3.2.1 Sort table data	Part 2
3.2.2 Configure cell margins and spacing	Part 2

Objective Domain	Covered In
3.2.3 Merge and split cells	Part 1; Part 2
3.2.4 Resize tables, rows, and columns	Part 1
3.2.5 Split tables	Part 1
3.2.6 Configure a repeating row header	Part 1
3.3 Create and Modify a List	
3.3.1 Create a numbered or bulleted list	Part 1
3.3.2 Change bullet characters or number formats for a list level	Part 1
3.3.3 Define a custom bullet character or number format	Part 1
3.3.4 Increase or decrease list levels	Part 1
3.3.5 Restart or continue list numbering	Part 1
3.3.6 Set starting number value	Part 1
4 Create and Manage References	
4.1 Create and Manage Reference Markers	
4.1.1 Insert footnotes and endnotes	Part 3, Topic 4-E
4.1.2 Modify footnote and endnote properties	Part 3, Topic 4-E
4.1.3 Create bibliography citation sources	Part 3, Topic 4-F
4.1.4 Modify bibliography citation sources	Part 3, Topic 4-F
4.1.5 Insert citations for bibliographies	Part 3, Topic 4-F
4.1.6 Insert figure and table captions	Part 3, Topic 4-A
4.1.7 Modify caption properties	Part 3, Topic 4-A
4.2 Create and Manage Simple References	
4.2.1 Insert a standard table of contents	Part 2
4.2.2 Update a table of contents	Part 2
4.2.3 Insert a cover page	Part 2
5 Insert and Format Graphic Elements	
5.1 Insert Graphic Elements	
5.1.1 Insert shapes	Part 3, Topic 2-C
5.1.2 Insert pictures	Part 3, Topic 1-A
5.1.3 Insert a screen shot or screen clipping	Part 3, Topic 1-E
5.1.4 Insert text boxes	Part 3, Topic 2-A
5.2 Format Graphic Elements	
5.2.1 Apply artistic effects	Part 3, Topic 1-B
5.2.2 Apply picture effects	Part 3, Topic 1-B
5.2.3 Remove picture backgrounds	Part 3, Topic 1-A
5.2.4 Format objects	Part 3, Topic 1-C
5.2.5 Apply a picture style	Part 3, Topic 1-B

<i>Objective Domain</i>	<i>Covered In</i>
5.2.6 Wrap text around objects	Part 3, Topic 1-A
5.2.7 Position objects	Part 1
5.2.8 Add alternative text to objects for accessibility	Part 1
5.3 Insert and Format SmartArt Graphics	
5.3.1 Create a SmartArt graphic	Part 3, Topic 2-D
5.3.2 Format a SmartArt graphic	Part 3, Topic 2-D
5.3.3 Modify SmartArt graphic content	Part 3, Topic 2-D

B

Microsoft Office Word 2016 Expert Exam 77-726

Selected Logical Operations courseware addresses Microsoft Office Specialist (MOS) certification skills for Microsoft® Office Word 2016. The following table indicates where Word 2016 skills that are tested on Exam 77-726 are covered in the Logical Operations Word 2016 series of courses.

<i>Objective Domain</i>	<i>Covered In</i>
1 Manage Document Options and Settings	
1.1 Manage Documents and Templates	
1.1.1 Modify existing templates	Part 2
1.1.2 Copy custom styles, macros, and building blocks to other documents or templates	Part 2
1.1.3 Manage document versions	Part 3, Topic 3-A
1.1.4 Compare and combine multiple documents	Part 3, Topics 3-C, 3-D
1.1.5 Link to external document content	Part 2
1.1.6 Enable macros in a document	Part 3, Topic 7-A
1.1.7 Display hidden ribbon tabs	Part 3, Topic 5-B; Part 1
1.1.8 Change the application default font	Part 2
1.2 Prepare Documents for Review	
1.2.1 Restrict editing	Part 3, Topic 5-A
1.2.2 Mark a document as final	Part 3, Topic 5-B
1.2.3 Protect a document with a password	Part 3, Topic 5-B
1.3 Manage Document Changes	
1.3.1 Track changes	Part 3, Topic 3-B
1.3.2 Manage tracked changes	Part 3, Topics 3-B, 3-C, 3-D
1.3.3 Lock or unlock tracking	Part 3, Topic 5-B
1.3.4 Add comments	Part 3, Topic 3-B
1.3.5 Manage comments	Part 3, Topic 3-B
2 Design Advanced Documents	

Objective Domain	Covered In
2.1 Perform Advanced Editing and Formatting	
2.1.1 Find and replace text by using wildcards and special characters	Part 1
2.1.2 Find and replace formatting and styles	Part 1
2.1.3 Set advanced page setup layout options	Part 1; Part 2
2.1.4 Link text boxes	Part 2
2.1.5 Set paragraph pagination options	Part 2
2.1.6 Resolve style conflicts by using Paste Options	Part 1; Part 2
2.2 Create Styles	
2.2.1 Create paragraph and character styles	Part 1; Part 2
2.2.2 Modify existing styles	Part 2
3 Create Advanced References	
3.1 Create and Manage Indexes	
3.1.1 Mark index entries	Part 2
3.1.2 Create indexes	Part 2
3.1.3 Update indexes	Part 2
3.2 Create and Manage References	Part 3, Topics 4-A, 4-B, 4-C, 4-F; Part 1
3.2.1 Customize a table of contents	Part 1; Part 2
3.2.2 Insert and modify captions	Part 3, Topic 4-A; Part 1
3.2.3 Create and modify a table of figures	Part 2
3.3 Manage Forms, Fields, and Mail Merge Operations	
3.3.1 Add custom fields	Part 3, Topic 6-A
3.3.2 Modify field properties	Part 3, Topics 6-A, 6-B
3.3.3 Perform mail merges	Part 1; Part 2
3.3.4 Manage recipient lists	Part 2
3.3.5 Insert merged fields	Part 2
3.3.6 Preview merge results	Part 2
4 Create Custom Word Elements	
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C

Microsoft Word 2016 Common Keyboard Shortcuts

The following table lists common keyboard shortcuts you can use in Word 2016.

<i>Function</i>	<i>Shortcut</i>
Open a document	Ctrl+O
Create a new document	Ctrl+N
Save a document	Ctrl+S
Undo an action	Ctrl+Z
Redo or repeat an action	Ctrl+Y
Bold the selected text	Ctrl+B
Italicize the selected text	Ctrl+I
Underline the selected text	Ctrl+U
Copy the selected text	Ctrl+C
Paste the copied text	Ctrl+V
Open the Navigation pane to search a document	Ctrl+F
Switch to print preview	Alt+Ctrl+I
Print a document	Ctrl+P
Insert a review comment	Alt+Ctrl+M
Go to the beginning of a document	Home
Go to the end of a document	End
Insert a hyperlink	Ctrl+K
Insert a line break	Shift+Enter
Insert a page break	Ctrl+Enter
Insert a column break	Ctrl+Shift+Enter
Change the case of the selected letters	Shift+F3
Capitalize all selected letters	Ctrl+Shift+A
Preview a mail merge	Alt+Shift+K

<i>Function</i>	<i>Shortcut</i>
Merge a document	Alt+Shift+N

Mastery Builders

Mastery Builders are provided for certain lessons as additional learning resources for this course. Mastery Builders are developed for selected lessons within a course in cases when they seem most instructionally useful as well as technically feasible. In general, Mastery Builders are supplemental, optional unguided practice and may or may not be performed as part of the classroom activities. Your instructor will consider setup requirements, classroom timing, and instructional needs to determine which Mastery Builders are appropriate for you to perform, and at what point during the class. If you do not perform the Mastery Builders in class, your instructor can tell you if you can perform them independently as self-study, and if there are any special setup requirements.

Mastery Builder 1–1

Formatting an Image

Activity Time: 10 minutes

Data File

Desktop\Projects\Manipulating Images\MB Newsletter.docx

Scenario

You will finish your work on the newsletter photos by formatting the photo of volunteer workers to appear like a rotated snapshot, with various corrections and adjustments to the photo quality.

1. From the **Desktop\Projects\Manipulating Images** folder, open **MB Newsletter.docx**.
 2. On the second page of the document, apply a picture style to the photo of the volunteer workers to make it appear like a snapshot, rotated slightly, with a drop shadow.
 3. Apply the **Through** formatting option to wrap text tightly to the edge of the photo.
 4. Resize and move the photo so the text flows around it, and the layout looks attractive to you.
 5. Adjust the brightness and contrast of the photo so you're satisfied with its appearance.
 6. Sharpen the image.
 7. Save the file in the current folder as ***My MB Newsletter***
 8. Close the file and exit Word.
-

Mastery Builder 2-1

Using Textual Graphic Elements

Activity Time: 10 minutes

Data File

Desktop\Projects\Using Custom Graphic Elements\MB Poster.docx

Scenario

Based on feedback from your colleagues, you are going to add text to the car show poster to point out that both classic cars and hot rods will be shown at the event. You'll also pull text from the main content of the poster you're working on, and move it to its own text box to call attention to the information within it.

1. From the Desktop\Projects\Using Custom Graphic Elements folder, open the MB Poster.docx file.
2. Add a WordArt object to the poster in the **Fill - Black, Text 1, Shadow** style.
3. In the WordArt object, type the text *Classic Cars and Hot Rods*
4. Set the **Layout Options** for the WordArt object to **In Front of Text** and **Fix position on page**.
5. Apply a **Text Effect** to curve the text along the bottom of the photo oval. Adjust the box size, position, and font size of the SmartArt to look approximately like this.



6. Select and cut the following paragraph.

Proceeds go toward ensuring that Building with Heart continues its mission of building and renovating homes for low income families in Greene City, Richland.

(You will paste this text into a sidebar.)

7. At the beginning of the document, insert a text box in the **Austin Quote** style.
8. Use the **Paste As Text** command to paste the text into the new text box.
9. Set the **Layout Options** of the text box to **In Front of Text** and **Fix position on page**.
10. Adjust the text box's size and location as shown. Delete paragraph marks from the text, if necessary, to enable lines to wrap.

 **Building with Heart**
Of Greene City, Richland

Cruise-in and Car Show

Classic Cars and Hot Rods

Saturday June 3
10:00 am to 11:00 pm
at the Downtown HouSalvage store parking lot
349 Main Street • Greene City, RL 12340

Food and beverages will be sold at Area 5 of Curtis Park
at the entrance adjoining the HouSalvage parking lot
2 Hot Dogs, Chips, and Root Beer - \$5

Register now to show your classic car or hot rod!
For information, contact Patsy Heald at (555) 555-1212,
or visit our web site at
www.bwhgreene.example/cruisein

Prizes Awarded!

Proceeds go toward ensuring that Building with Heart continues its mission of building and renovating homes for low income families in Greene City, Richland.

11. Save the file in the current folder as **My MB Poster.docx**

12. Exit Word.

Mastery Builder 3–1

Managing Tracked Changes

Activity Time: 10 minutes

Data File

Desktop\Projects\Collaborating on Documents\MB Fact Sheet.docx

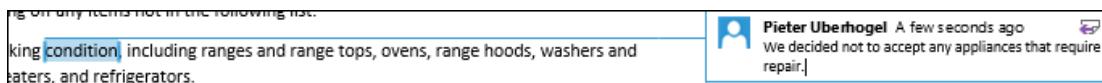
Scenario

You have been working on MB Fact Sheet.docx, and you have received tracked changes from another user, who has included a logo graphic and several other revisions. There was some confusion over whether the organization would accept donations of appliances that require repair. In regard to that point, the reviewer made one change to the document that you will not accept.

1. From the **Desktop\Projects\Collaborating on Documents** folder, open the **MB Fact Sheet.docx** file.
2. Show all markup.
3. Review each of the tracked changes.
4. Reject the following insertion.

- **Appliances:** Items in good working **or repairable** condition, including ranges and range tops, ovens, range hoods, washers and dryers, gas or electric water heaters, and refrigerators.

5. At the location where you rejected the insertion, add a comment as shown.



6. Accept all remaining changes.
7. Save the document in the current directory as **My MB Fact Sheet.docx**
8. Exit Word.

Mastery Builder 4–1

Updating Document References and Links

Activity Time: 10 minutes

Data File

Desktop\Projects\Adding Document References and Links\MB Risk Assessment.docx

Scenario

You've misspelled the author's first and last names in the citation for **Risk Management for Nonprofits**. You need to update the source and refresh the bibliography to reflect that change. You will also add a hyperlink to the website name in the first page's footnote.

1. From the **Desktop\Projects\Adding Document References and Links** folder, open the **MB Risk Assessment.docx** file.
 2. In the second paragraph under the Introduction section, change the author's name from **Leslie Oakes** to *Lesley Ochs*.
 3. Use the **Source Manager** dialog box to edit the source for **Risk Management for Nonprofits**. Change the author's name to *Ochs, Lesley*.
 4. Update the bibliography.
 5. In the footnote for page 1, add a hyperlink to the website for www.bwhgreene.org/standards.
 6. Save the file in the current folder as *My MB Risk Assessment.docx* and close the document.
 7. Exit Word.
-

Mastery Builder 6–1

Creating a Form

Activity Time: 20 minutes

Scenario

Building with Heart maintains a large collection of power equipment and other tools that can be signed out for use on various projects. To keep track of the location of these tools, project managers are required to fill out forms to borrow the tools for each project. You will create a form to be used for this purpose.

1. Create a new blank document.
2. Create a title and table as shown.

Tool Checkout Form

Tool Name	
Asset Number	
Checked Out By	
Project	
Date Checked Out	
Date Checked In	

3. Add a form field to each table row, as shown.

Tool Checkout Form

Tool Name	Click or tap here to enter text.
Asset Number	Click or tap here to enter text.
Checked Out By	Click or tap here to enter text.
Project	Click or tap here to enter text.
Date Checked Out	Click or tap to enter a date.
Date Checked In	Click or tap to enter a date.

4. Modify the prompt for the Checked Out By field as shown.

Tool Checkout Form

Tool Name	Click or tap here to enter text.
Asset Number	Click or tap here to enter text.
Checked Out By	Name of project manager.
Project	Click or tap here to enter text.
Date Checked Out	Click or tap to enter a date.
Date Checked In	Click or tap to enter a date.

5. Save the form as a template named *My Tool Checkout Form.dotx* and close the document.

6. Create a new document using the template.
 7. Fill in the fields with some data and save the form in **Desktop\Projects\Using Forms to Manage Content** as *My Filled Tool Form.docx*
 8. Exit Word.
-

Mastery Builder 7-1

Using Macros

Activity Time: 10 minutes

Data File

Desktop\Projects\Automating Repetitive Tasks with Macros\bwh logo.png

Scenario

You frequently add a logo to the top of documents you create. You will record a macro to do this task for you automatically.

-
1. Create a new blank Word document.
 2. Using the macro recorder, start recording a macro named *Banner* that will run when you press **Alt + B**.
 3. Record the following steps:
 - Insert the picture **Desktop\Projects\Automating Repetitive Tasks Using Macros\bwh logo.png** at the top of the document.
 - Select the **Layout Options** button next to the image.
 - Select **Top and Bottom** text wrapping and **Move with text**.
 - Close the **Layout Options** pane.
 - Press **Ctrl+End** to move to the end of the document
 - Press **Enter** to start a new paragraph.
 4. Stop the recording.
 5. Display the Visual Basic programming environment and save the Normal template.
 6. Exit Word without saving the document.
 7. Launch Word again. Create a new document and use the macro to add the logo.
 8. Exit Word without saving the document.
-

Solutions

ACTIVITY 4–2: Adding Cross References

3. How might the cross-reference link be more useful in a printed version of the document?

A: Because links are useless for navigation in a printed document, the cross-reference might be more useful if it showed a page number where the table can be found.

ACTIVITY 7–2: Identifying Word Macro Uses and Concerns

2. What macros on these websites did you find most interesting or useful?

A: Answers will vary. A wide variety of macros have been developed. Some provide general features, while others are highly specialized to a particular task or kind of work.

3. What issues might you consider when looking for sources of Word or Office macros?

A: Because malware can be implemented through macros, you should always consider cybersecurity. Obtain your macros through reputable sources. Some professional disciplines (such as the sciences, technical writing and editing, and so forth) may offer collections of macros designed to support the types of tasks you perform on the job. Because macros are software, issues relevant to any piece of software may be of concern to you: such as cost, availability of support and maintenance, related services such as customization, and so forth.

Glossary

bibliography

A list of references that is usually inserted at the end of a section or document.

bookmark

A marker within a document that enables users to quickly return to a given location.

CA

(certification authority) A third-party that issues digital certificates.

caption

A phrase that describes an object such as a picture, graphic, equation, or table.

citation

A reference to any legal source of content.

citation style

Provides guidelines for the proper format of citations and other information in text and reference lists.

content control

A container used in forms and templates to prompt the user for specific information.

cross-reference

Directs the reader to a particular location in a document.

digital certificate

An electronic file that contains unique information that is in an encrypted form, which can be used to establish the identity of the person or organization who attached the certificate to a document.

digital signature

An electronic mathematical cryptographic method of proving the identity of the macro publisher.

drawing canvas

Enables you to manipulate a group of shapes as a single entity.

drop cap

Formats the first letter in a paragraph to descend beyond a single line, sometimes in a different font.

embed code

A code created by sites such as YouTube when you choose to share a video. The code can be added to emails, Facebook posts, and documents to link directly to the shared video.

endnote

A reference note inserted at the end of a document section.

file validation

A process that checks any file you attempt to open from an untrusted source to verify that it is a valid file.

footnote

A reference note inserted at the bottom of a page.

form

A document used to collect information for a particular purpose in a consistent format.

form field

A container inserted into a form that is used to collect a specific type of information.

hyperlink

A navigational tool that links the contents in a document to other specific content, thereby enabling direct navigation to the linked content.

legacy form field

A type of form field used to collect information and that is compatible with Word 2003 and earlier versions.

Legal Blackline

Compares differences between two similar documents, displaying those differences in a new document.

macro

A set of instructions that are accessed and performed with a single mouse click or keyboard shortcut.

metadata

Key details about document properties stored with the file.

module

A block of VBA code in which macros are stored.

pull quote

A text box containing text you want to emphasize or use as a teaser. Typically text is copied from within the document.

shape

A geometric figure you can add to a document.

sidebar

A text box that typically contains text that is supplemental text to support the text in the document.

signature line

A line used to add a digital signature to a document.

SmartArt

A predefined graphics object laid out to enable you to illustrate things such as a process, hierarchy, cycle, or the relationship between items in the illustration.

source

Reference material from which content is borrowed.

text box

A Word object that enables you to place text anywhere in your document.

text wrapping

An option used to arrange images and text in a document.

Track Changes

A reviewing feature that enables you to see where the modifications have been made in a document.

VBA

(Visual Basic for Applications) A programming language embedded in Microsoft Office applications that is a subset of the Visual Basic programming language.

WordArt

Text with special effects applied to it.

wrap points

The settings that determine the amount of negative space between an image and the text wrapped around it.

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